

TEXTILE BULLETIN

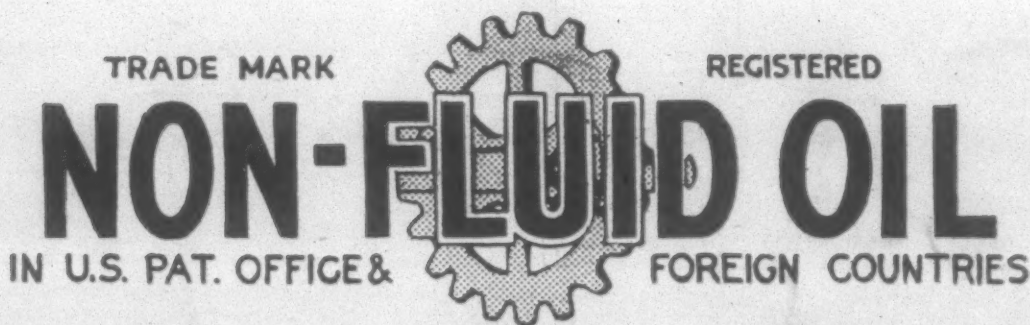
Vol. 55

October 1, 1938

No. 3

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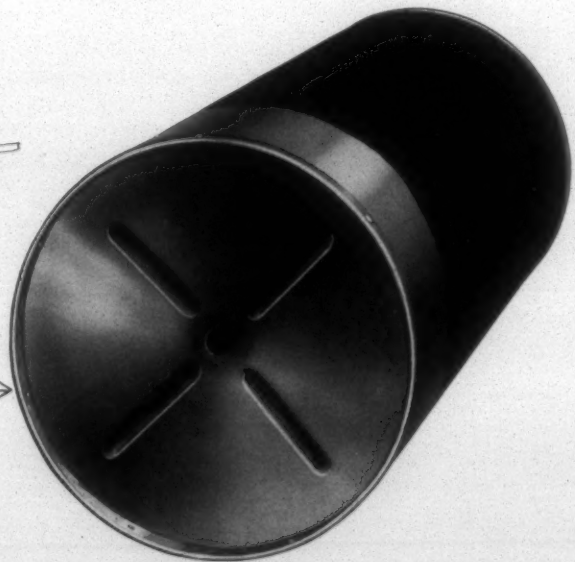
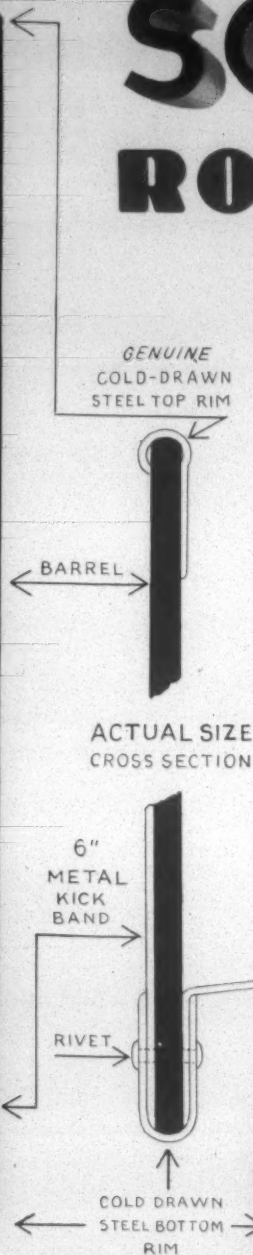
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**our card room efficiency
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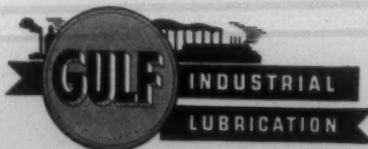
"WHEN the weaving room began making heavier cotton goods, we had to get more production from our cards," says this overseer, "and with Gulf's higher quality lubricants in service (as this Gulf engineer recommended) we've been able to do it. Our comb boxes now run fifteen to twenty degrees cooler, our production has been greatly improved and our oil costs reduced. We are thoroughly sold on Gulf's quality oils in this plant!"

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Opportunities For Executive Development And Advancement



By Robert R. West
President, Riverside and Dan
River Cotton Mills

A FRIEND of mine was discussing with me some time ago the question as to what constitutes good industrial management. He is a financier, and one who regards the management of industry as something of a divine calling. He puts that importance on the necessity of running industry well. We were, of course, discussing professional management rather than owner management, because a significant part of his great responsibilities is assessing the competence of management in various enterprises, and in many cases arranging for adequate management. I had remarked, in the course of our conversation, that it might be a good plan to change the chief executive of any large business at least once every ten years. That is to say, no one man should be allowed to run a business over ten years. My suggestion was that the chief executive be changed at that time, regardless of the incumbent's success, to make room for the oncoming generation. The thought of providing opportunity for the younger men was not uppermost in making this suggestion. It was rather the welfare of the business in providing a different direction and stimulation. Conversationally I played this idea with increasing interest and satisfaction, until I was brought back to earth by this observation on the part of my friend:

"There is not enough management available for business to do that."

At first this comment seemed to be ill-considered, when one thinks of the great number of young men clamoring for an opportunity in business to demonstrate their ability, and being held in check by the innate conser-

vatism of executives currently holding the positions. The tremendous development of industry certainly bears witness to the fact that there is no lack of available management. The engineers, the accountants, the financiers, the sales managers, the production managers offer an adequate supply to man the industry of the world at frequent intervals. It seems, however, that my friend was not thinking of the technicians. He was thinking of the business men; those executives who have to deal with the non-measurable characteristics of business activity, who cannot get their answers on slide rules, or out of test tubes, or off charts. His comment was that there is not a sufficient supply of trained executives, who, by their inferential and imaginative calculations, are able to provide accurate direction and a sound tempo to the work of the technician.

Veblen, I believe, is responsible for the theory which has wide acceptance, that one of the chief troubles with industry is that it is run as a business enterprise rather than as a service enterprise; that if industry could be taken out of the hands of business men and put in the hands of technicians, to be run purely as an engineering or technical feat, much good could be accomplished. The elaborate schemes for economic plan-

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ning which crop up in every magazine issue are stepchildren of this theory. The ability of the engineer and the technician to remove all industrial vexations, to supply mankind with an ever increasing abundance of material blessings, has become firmly embedded in the economic thinking of recent generations and, consequently, industry is amply supplied with technicians of extraordinary ability. The procedures of selection, training and placement of technical executives are very well defined, and on the whole work effectively and efficiently. That is to say, the good technicians get positions of responsibility and authority in industry. The indifferent ones do not. Much thought and a vast amount of experimentation have gone into perfecting these procedures, with the result that our technical schools and industrial establishments have very effective means of throwing competent technicians to the top of industrial management. This, indeed, is an accomplishment of the first magnitude. The situation has reached that stage where, if an industrial establishment has not provided itself with the necessary technical competence in its executive personnel, the chances are that it is the fault of that particular management, rather than the fault of the available methods of technical training.

Technical Skill Not Enough

There has been ample demonstration, however, within recent years that technical competence alone is not enough. A guiding hand must be put on technology. The social, political and economic responsibilities which are being placed upon modern business, demand the selection and training of that type of executive—to supplement the work of his technical brethren—who is qualified, by knowing how to deal with these non-measurable characteristics, to give, in the first place, orientation, and in the second place, economic soundness, and in the third place, social adaptation to business enterprise. For executives supplying this type of leadership, industry has had to depend, in a large measure, on the chance of genius breaking through or the hope of seniority giving a good average performance. I should like to advance the thesis that business should make a conscious effort to seek out, select, train and place "business men" executives in as well conceived a method as it does technicians. There is increasing recognition of this need. To an accountant, for instance, a balance sheet is a balance sheet, and an income account is an income account—no more, no less. Its technical perfection is marred by any lay interpretation. To the modern business man, however, his balance sheet and income account become vehicles for interpreting his business to the public and all other interested parties. The finesse of judgment as to the use of this interpretation is one of those non-measurable characteristics which

are apart from technology. To the production engineer, production is production, and any interference with it is anathema. The exquisite satisfaction of producing is seldom tempered, in time, by the cool consideration of marketability. To the salesman, a sale is a sale. The technicians must of necessity have a singleness of purpose, else a large portion of their effectiveness would be lost or seriously diluted. Industrial management does, however, need trained executives who are able to fuse the singleness of purpose of the technicians with the realities of the business situation as a whole.

Non-Measurable Characteristics of a Business

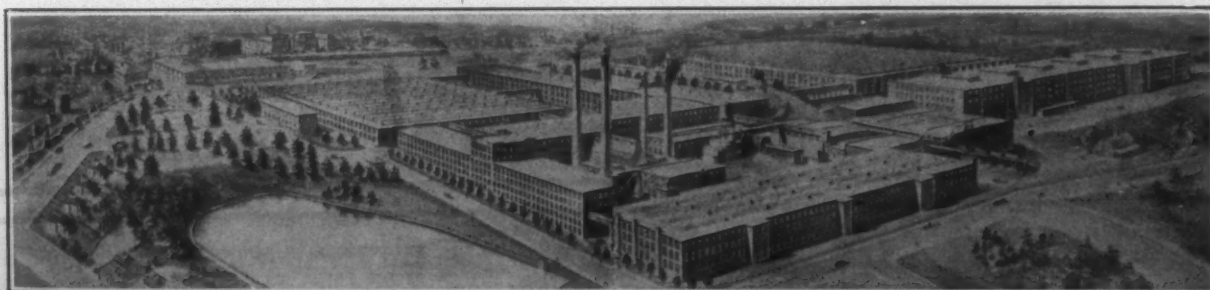
It might be well, at this point, to outline what is meant by the term "non-measurable characteristics" of a business. They, of course, vary from business to business, but they have a common denominator, namely, that there are no formulae available for application. Some of these characteristics are as follows:

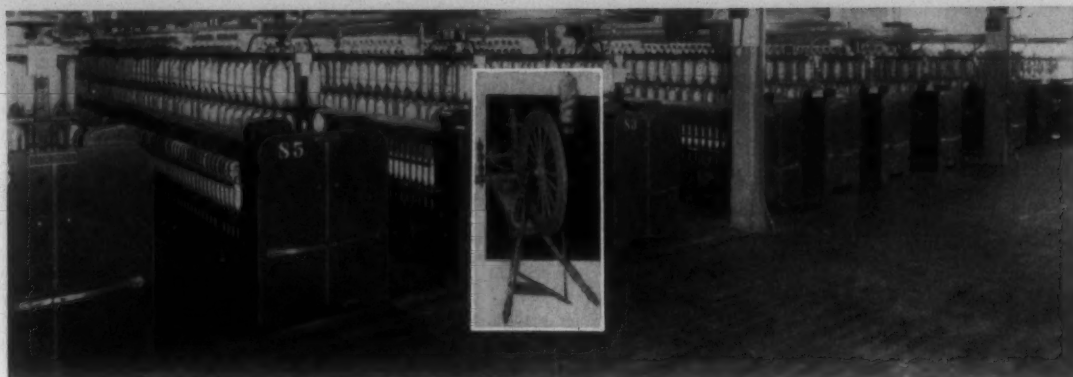
- A. The anticipation of major trends affecting a business.
- B. The market position of a business.
- C. The esprit de corps of an organization.
- D. The co-relation and synchronization of the abilities and temperaments of those associated in a business.
- E. The reconciliation of technical formulae with human capacity and temper.

It will be readily admitted that considerations of this nature are of supreme importance in shaping the destiny of a business enterprise. Yet there are no accurate formulae which lead to correct solutions. Elements of such problems vary from business to business and from locality to locality, and defy the application of such formulae as are inherent in technical training. One or two illustrations may clarify what I have in mind.

It has been demonstrated that the advance of technology, sometimes referred to as technological improvement, has in an over-all sense not created unemployment. The formula is well understood. The development of machinery which reduces the man hours required for a given output, lower costs or improves value, widens markets, providing an increased demand which creates new jobs, etc., etc. The increasing ratio of the gainfully employed of the total population attests the soundness of the formula. Yet, when high speed automatic spooling and warping is installed in a cotton mill which hitherto operated the old style, men and women lose their jobs

(Continued on Page 46)





Spinning Room Potpourri

Part 2

By T. R. Brockleman

AS was noted in the first of this series of articles, there is to be no logical sequence or pattern of the subjects taken up. They are written as they come to mind, and will range from logical treatment to some ideas of the writer that have been termed "wild."

Checking Speeds

Spindle and front roller speeds are of vital importance to the proper operation of a spinning room, and yet are treated in a careless manner in an amazing number of otherwise well run spinning rooms. A reliable speed indicator should be standard equipment in every spinning room, and should be in almost constant operation if there are many changes from one count of yarn to another, or variations in twist of the yarns. There are a number of good speed indicators on the market, ranging from the small pocket size model, which requires a stop watch for best operation, to the more elaborate types for high speeds.

The pocket model, about an inch in diameter and two and a half inches long, overall, is fairly accurate on low speeds, up to 200 r.p.m. It can be used with a pocket watch with a second hand, though a stop watch will give better results. If nothing better is available it can be very useful for checking front roller speeds. The more expensive dial instruments, with attachments for taking speeds on either bored or flat end rollers and shafts, is apt to be more satisfactory and less susceptible to error on the part of the operator. In recent years there has been introduced the Stroboscope, a rather delicate but very accurate instrument for taking speeds and observing the spindle action. With this instrument it is possible to check all the spindles on a frame to observe the difference in r.p.m. from spindle to spindle. This is a visual instrument, and does not exert any pressure on the spindle which might tend to lessen the normal speed of the spindle, and it also may be used with the spindle in operation, with the drag of the traveler in effect so that the actual speed may be observed.

Every spinner knows that the difference in the rate of delivery of the front roller and the take up of the spindle determines the twist of the yarn; that is elemental. But not every spinner realizes the possibility of excess variation in twist as a result of variation in speeds from spindle to spindle. Many spinners assume that their spindles are running at uniform speeds all over the room, that is, at a uniform speed on each frame. The use of a stroboscope to show the actual variation in speed would flabbergast a goodly number of these spinners. Even the best spinning rooms show a considerable variation from spindle to spindle, and in some mills the results of a check-up are truly amazing—amazing that the yarn can be sold or woven into cloth.

There are a number of causes of variation of speed in spindles, the principle one being slack bands or tapes. Other causes are lack of oil, bad bolster, out of plumb, crooked spindle, unbalanced bobbin, worn traveler or ring, grit or lint from a broken oil spout cover, etc. Any of these things may cause a variation in speed and a corresponding variation in twist, because the front roll is delivering the same amount of yarn to all the spindles on a side.

Taking up the most prevalent cause of spindle speed variation, slack bands or tapes, it may be noted that bands are far more liable to give this trouble than are tapes. The bands, in addition to stretching and wearing out much faster than tapes, contact only a very small portion of the spindle. The whorl on a band driven spindle is V shaped, whereas the band is circular, which means that the band only contacts a very small area on each side of the whorl. Add to this the fact that many of the bands are made from yarns that could not be utilized otherwise, due to oily or dirty condition, etc., and it is surprising that the yarn from band driven spinning frames is as good as it is.

Even if the odds are already against you, and band drive is all that you have, there are a number of things

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The Importance of Loom Stoppage Reports

By "Weaver"

To The Weave Room

This is the first of a series of articles on weave room operation by a Southern mill man who believes in keeping up with the march of progress, and who believes that the cotton mill of tomorrow will be operated on a much more scientific basis than has been the case in the past.

WHEN properly conducted and properly used, loom stoppage check-ups can be of much value to the weave room overseer. By efficient analyzing and filing of stoppage tests, it is possible to build up, over a period of time, valuable records that will result in increased efficiency in the operation of the weave room.

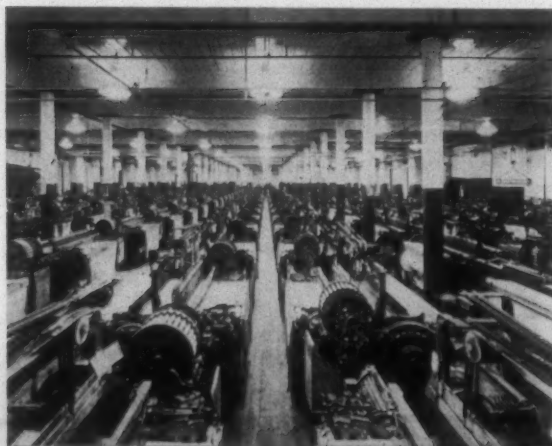
In other departments of the mill, usually there are a comparatively small number of causes that will result in excessive end breakage or machine stoppage. In the opener room or picker room a broken part, a choked roll or screen, or a fire, are the chief causes for stoppage.

Cards lose production chiefly through the web breaking down or machine trouble. Drawing frames stop chiefly from sliver breaks at the feed end. And so on through the processes of the mill, there are a limited number of causes for loss of production.

Such is not the case in the weave room, where there are so many reasons for loss of production through stoppage that it would take pages to enumerate them. The weave room is faced with the problem of handling material over which the weave room overseer has little or no control. The yarns have been through many processes not under the control of the weaver, and there is little that can be

but one department of the mill, the cloth room. However, it is possible, through the proper checking of loom stoppage and proper analyzing of results obtained, to benefit both the weave room and other departments of the mill.

When production falls off in the weave room it is probable that the weave room overseer will be asked the reason. A mere statement from him that the warps are



done by him if the yarns reach him in poor condition. He is forced to cope with the accumulated errors of all

the weather is responsible, is apt to be unsatisfactory. If he has records to show just what is causing the de-bad, or the filling is showing excessive breakage, or that crease in production, and the approximate time that it started, he is in a much better position to state his case. Loom stoppage checks will not only give the overseer definite facts to back up his defense, but will also serve as a guide toward the elimination of the trouble.

Eliminating all other reasons for increases in loom stoppage other than warp and filling breaks due to faulty yarn, it is sometimes possible to trace the trouble to its source through properly kept loom stoppage tests. If the overseer can show that during the month of October, for instance, both warp and filling breaks showed a decided increase, it may be possible to trace the trouble to some change in the preliminary processing of the cotton. Perhaps a new batch of cotton was started in September, and the cotton is at fault. A change of blending in the opener room might have been the cause, or

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IDEAS THAT *Clicked*

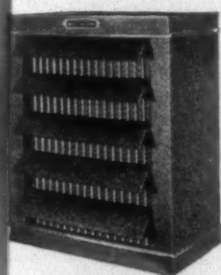


1. An engineering student, Rudolph Diesel, got his idea for the present day Diesel engine at a thermodynamics lecture on the operating inefficiencies of the steam engine.

2. First, he proved his principle on paper. Then, set out to make it work. Strangely enough, he planned to use, not oil, but powdered coal as a fuel, to be ignited by high compression.

3. After years of effort, the idea was perfected and clicked. Oil proved a better fuel, but the Diesel revolutionized engine technique—won wide acclaim for its originator.

IDEAS THAT *Click* WITH HEATING BUYERS

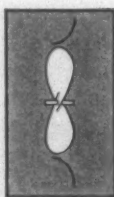
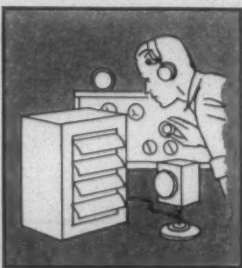


Venturafin Unit

High Velocity Venturafin—For Hard-to-Heat Plants—Has high outlet velocities and correct design for carrying heat long distances with minimum noise. Heats the working zone—not the ceiling.

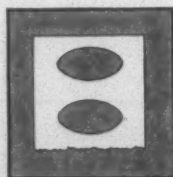
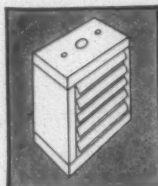
Low Velocity Venturafin—For Smaller Areas—Is ideal for smaller areas and where quiet operation is essential. This unit has a low tip speed and low outlet velocity. No other heater duplicates its features and quiet operating qualities.

The Only Unit Heaters With Catalogued Sound Ratings—Only American Blower gives you catalogued sound ratings arrived at by thorough tests with extremely accurate sound recording equipment. This saves guesswork.



Streamlined Inlet—Here's an idea in design that saves you money—The accurately die formed streamlined inlet of American Blower Unit Heaters saves up to 35% in horsepower. This means important savings in operating costs.

Individually Adjustable Louvres—Die formed logarithmic curved louvres permit you to deflect the heated air at any angle and control heat distribution

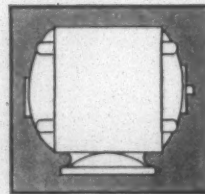


All Tubing Airfoil—Extra heavy Airfoil shaped seamless copper tubing gives maximum heat transfer, minimum air flow resistance, for operating economy and ruggedness.



Wide Area Blades—American Blower Units have the most efficient propeller fans we have been able to design—the result of over 57 years' experience. The famous wide area epicycloidal wheel is the quietest and most economical known in the industry.

All Motors Are Nationally Known Makes—Totally enclosed, with thrust combination, sleeve bearings and resilient mounted for quiet operation.

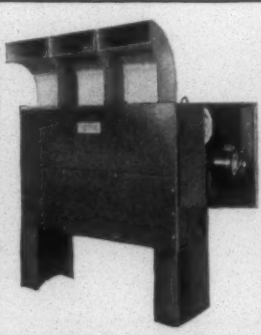


Cast Bronze Headers—Cast bronze "steam metal" used instead of pipe in coil headers costs us more but saves you money, gives units longer life.



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AMERICAN BLOWER

Industrial Unit Heaters Keep You Comfortable

Spinning Room Potpourri

(Continued from Page 7)

that can be done to offset the disadvantages. The writer feels perfectly safe in stating that Monday mornings are very troublesome from the standpoint of band breakage. From the time the frames are started until a few hours later, bands are flying off all over the room. That is, assuming that you have not taken any particular steps to overcome this trouble.

The writer has seen this trouble eliminated to a considerable extent by doing a little Saturday work while the mill was not running, or if conditions are as they have been for the last several months, almost any time during the week when the mill was not running. The mill in question had several men come in on Saturday to check and replace as many bad bands as possible. Two of the men (the number would depend on the size of the plant) went down each side, dragging their hands along the bands just inside the spindle rail. In this way they could detect all the very loose bands that were sure to come down Monday morning, and the spindle rail was marked with a piece of chalk at each slack band. Then there were several men following them, cutting off the old and tying on new bands. It is much easier to detect a slack band when the frame is not running, and much easier to tie in a new one. Also, there is no loss of production or part bobbins when this system is used.

Another factor that may lead to excessive slack bands is the lack of uniformity of tension when the band tier puts on a new band. Without mechanical aid, no two men will put the same tension on a band, nor will the same man put the same tension on all the time. To get around this, there is a mechanical device that clamps onto the spindle rail easily, whereby the band may be tied with uniform tension at all times. This instrument is not perfect, since it is operated by a spring, but it is far superior to hand tying. The idea is to pull the band until a catch on the mechanism operates, then the knot is tied, and the band has the most uniform tension that is possible with any means so far devised. It should not be necessary to say that all band tiers should use the same knot.

The writer will not attempt to pass on the respective merits of roving bands and yarn bands, except to state that with one exception he has found the yarn bands to be the most satisfactory. Roving bands are not as apt to stretch as yarn bands.

Before tying on new bands, it is important that they be kept for several hours in the spinning room or in some room with the same humidity as the spinning room. If the bands are kept in a place with less humidity they may shrink and break when brought into the spinning room, or if kept in a place with higher humidity they will slacken off when exposed to the lesser humidity of the spinning room. This applies particularly to yarn bands.

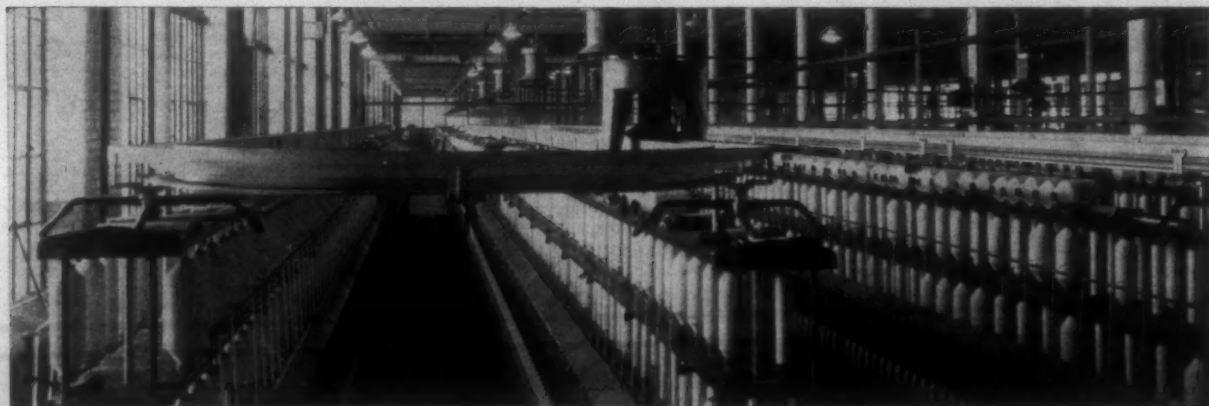
Spinning tapes, while less trouble than bands, come in for their share of controversy. There is the question of weave, whether basket or herringbone; weight, whether light or heavy; method of joining, whether a short lap or long lap, cement or sewing, or the joint where each end of the tape is bent at right angles and sewed, without lapping at all, but leaving a tail on the outside. All of these types and methods of application have their advantages and disadvantages, some of which the writer will attempt to cover.

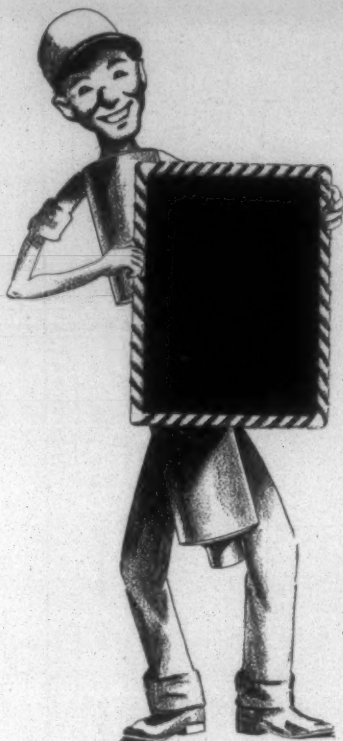
With regard to the basket or herringbone weave, there seems to be little difference in the wearing quality, though some assert that the herringbone weave has less tendency to stretch. On the other hand, it is likely, though the writer is not sure of this, that the basket weave would stretch more uniformly than the herringbone. However, the amount of stretch likely on either type is not considerable, and both types perform satisfactorily.

Recently a number of mills have been installing a much lighter tape than has been in vogue in the past. The arguments for this lighter tape are that it consumes much less power, makes a smaller lap, is less effected by the flexing action at the whorl of the spindle, and results in less vibration and slippage on the spindle. Arguments against it are chiefly that the cost is greater and that it will not wear as long.

The writer has not personally checked on the lighter tape, but has talked with men who have done so, and they seem to be of the opinion that the lighter tape is superior. Spinners have reported the saving of 10 to 20 per cent on power, which would seem to indicate that the lighter tape has the advantage over the heavy. One spinner was using $\frac{5}{8}$ -inch tape measuring 46/1000 inch in thickness. He changed over to a 31/1000-inch tape, and reported a 12 per cent saving in power. Also, he reported that although he had not been using the thinner tape long enough to have accurate figures on the life of the tape, he felt that the thinner tape would last as long

(Continued on Page 32)





GILLEATHER

HAS A CLEAN SLATE WHEN IT COMES TO COCKLED YARN

Never yet has Gilleather been blamed for cockled yarn or for any other yarn defect.

That's because it drafts evenly and smoothly as long as it lasts.

It has this characteristic not only due to its natural cushion but also due to the fact that every process in its manufacture is pointed toward UNIFORMITY. All skins are selected for uniform grain, carefully tanned for uniform finish, accurately shaved for uniform thickness and expertly finished for maximum wear.

Gilleather wears out of course, but when it does it CAN'T make bad yarn, because it roughs up and automatically breaks down the end. That's worth a lot to any mill, since there's no telling how much a lot of defective yarn will cost before it's discovered.

Gilleather can also pass all other requirements of the 12 POINT TEST. That's why it's survived the competition of so many substitutes for more than a century.

GILL LEATHER COMPANY, SALEM, MASS.

GILLEATHER
SHEEP and CALF SKIN
for TOP ROLLS

THE 12 POINT TEST

1. Does it automatically stop spinning when it makes bad yarn?
2. Does it retain its cushion and resiliency in low temperatures, as over the week-end in winter, and as long as it will draft?
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7. Does it eliminate lap-ups as long as it will make good yarn?
8. Does it eliminate cockled yarn, other factors being correct?
9. Does it produce yarn of maximum strength for a given staple, other factors being correct?
10. Does it require a minimum of attention?
11. Does it function properly ALL the time until worn out?
12. Has time proved it any better than the 600 odd "improved" roller coverings that have come and gone?

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Loom Stoppage Reports

(Continued from Page 8)

changed beater speeds on pickers, or increased card production, or an increase in speeds in the spinning room, or any of a hundred other changes that might have occurred in the card room, spinning room, or slasher room. An efficient superintendent will know of any changes that have been made, and if the weave room overseer can show definitely that the cause of increased loom stoppage is due to increased warp or filling breaks, or both, and that he has made no changes in his own room, then the superintendent is in a better position to find the cause of the trouble and eliminate it.

The cost of making loom stoppage tests is not great. In a small mill one man may be able to handle all the work involved; and if the reports are properly handled the expense will be repaid many times over. Tests should be conducted over all the looms in a weaver's stand, and under all conditions. Naturally, the longer the period over which the tests are taken, the more satisfactory will be the results, and snap judgments as a result of short tests may be worse than nothing at all. Unless undertaken seriously, and with the intention of maintaining the testing as a permanent part of weave room operation, there will be little value obtained. To ascertain that there are 25 warp breaks per thousand picks on a certain construction means little unless there are previous records for comparison, or unless the records are to go on file for comparison at some future date.

Suggestions as to possible forms for loom stoppage studies are shown on figures 1 and 2. Figure 1 is for recording the number of picks studied on each style of goods or variation in width or type of loom, plus other pertinent facts.

All of the data for figure 1, except the last three columns may be incorporated in the report prior to the beginning of the actual study, from records in the weave room office.

This report operates in conjunction with figure 2, which may be fastened in an ordinary clip-board while taking the study. Care must be exercised in selecting the person to make these tests, to be sure that they are carefully conducted, and that the person selected has enough knowledge of weave room operation to assure accuracy.

The figures shown for example in figure 2 are greatly exaggerated, and it must not be assumed that a 64 x 64 construction of that type would show as many breaks as this. The figures are for illustration only.

These forms may not be applicable to all mills, but are meant to serve as a guide to the overseer in formulating charts of his own.

Analytical forms, which will show results of a series of tests conducted in accordance with forms 1 and 2, will not be shown, since there are so many varied forms they might assume, depending on the type of mill, variety of goods, etc. From the information obtained from tests using forms 1 and 2, over several hours duration and under varied conditions, the weave room overseer should be able to consolidate the information into easily accessible form.

Loom No.	Loom Width	No. Harness	Style of Goods	Width of Goods	Ends Per Inch	Picks Per Inch	Warp Yarn No.	Filling Yarn No.	Pick Reading Start	Pick Reading Finish	Total Picks (M)
Example											
221	40"	3	1221	36"	64	64	26/1	25/1	068	135	67

FIGURE 1

Loom No.	WARP BREAKS								FILLING BREAKS						LOOM FAULTS										
	Gout	Stuck End	Weak Yarn	Seize Break	Mat Up	Loose End	Unknown	Total	Tangle	Slough Off	Soft Place	Loom Fault	Unknown	Total	Shuttle	Drop Wire	Let Off	Take Up	Pulling Feeler	Bang Off	Defective Harness	Unknown	Total	Total Stops	
Example																									
363	II		III	I		I	III	10	II	III	III	III	III	15	III	I					II		III	11	36

FIGURE 2

FIGURE 2

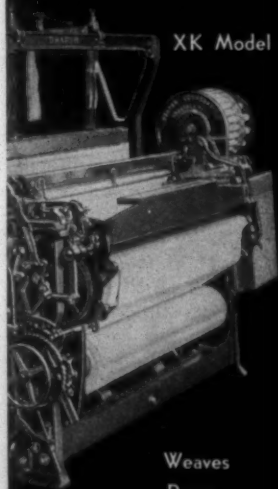
Loom Stoppage Report

Loom Stoppage Report

Perfect Team Work and the Best Equipment
Win Eight-Oared Boat Races



Perfect Team Work and the Best Equipment
Win Textile Mill Profits



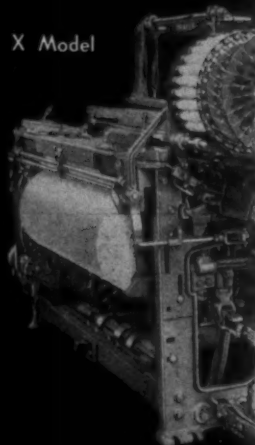
XK Model

Weaves
Rayons
at
172 Picks
Per Minute

A Well Trained Crew Couldn't Win
if Seated in a
Slow Leaky Boat

Your Mill Crew
May Be Efficient
But It Will Be
Badly Handicapped
With Slow Obsolete Looms

X Family High Speed Looms
are 20% Faster
and Weave Better Cloth



X Model

Weaves
Cottons
at
192 Picks
Per Minute

DRAPER CORPORATION

Atlanta Georgia

Hopedale Massachusetts

Spartanburg S C

Morton Chemical Co. Succeeds Textile Chemical Co.

Greensboro, N. C.—Incorporation of the Textile Chemical Products Co. under the name of Morton Chemical Co., Inc., with authorized capital stock of \$100,000, election of new officers and the letting of a contract for extensive additions in equipment at the plant on the High Point Road were made public after a reorganization meeting of the directors of the company held at the offices of Hobgood and Ward, attorneys.



Joseph R. Morton

Joseph R. Morton, of Greensboro, who, with J. D. Pell, general manager of the Angle Silk Mills, of Rocky Mount, Va., founded the company in November, 1931, to manufacture warp sizing compounds for rayon mills, was elected president and treasurer of the company. R. B. Morton was elected vice-president and W. H. McCormick, Jr., was chosen secretary.

Mr. Morton, who has been prominently connected with the rayon industry for a number of years, will devote his entire time to the new company, the charter for which was issued September 7th. Directors of the company, in addition to Mr. Morton, are R. B. Morton and J. D. Pell.

The new company will continue to represent the M. Werk Company, of Cincinnati, Ohio, on textile soap; the Atlantic Refining Company on white oils, and the Diamond Alkali Company, of Pittsburgh, Pa.

American Paper Tube Purchases Shambow Shuttle Co.

On September 9, 1938, American Paper Tube Company purchased outright from the Draper Corporation, Hopdale, Mass., the entire corporate stock of Shambow Shuttle Company. Both companies are located in Woonsocket, R. I., and are leaders in their respective fields.

The American Paper Tube Company was established in 1898 by the late Col. Edmond H. Guerin and is the only manufacturer of hardened and impregnated tapered tubes, quills and bobbins in the United States. Its products are widely used throughout the textile spinning and weaving industries, particularly for silk, rayon, woolen and worsted yarns. Harold L. Armhein is treasurer and general manager and Edmond H. Guerin, Jr., is assistant treasurer and assistant secretary.

The Shambow Shuttle Company has been in business since 1879 and for a number of years has been a financially strong and progressive concern under the management of Herman Nova, vice-president and general manager.

Since shuttles and bobbins (both loom accessories) are so closely allied in use, it is felt that the merging of the

experiences of these two companies will result in important benefits to the textile industry.

The Shambow Shuttle Company will continue in its present location and under the same management as in the past, the only change in organization being the election of Harold L. Armhein as president and of Edmond H. Guerin, Jr., as secretary and treasurer.

N. C. Cotton Manufacturers Meet Nov. 3-4

The Thirty-Second Annual meeting of the North Carolina Cotton Manufacturers' Association will be held at the Carolina Hotel, Pinehurst, N. C., on Thursday and Friday, November 3rd and 4th.

Those who desire to play golf are requested to come on Thursday in order to take part in the matches which will be held on that day.

Thursday evening there will be a meeting of the Board of Directors. The business program on Friday will be devoted largely to rules and regulations under the Wage and Hour Law, and a discussion of some of the more important tax problems, which we are facing.

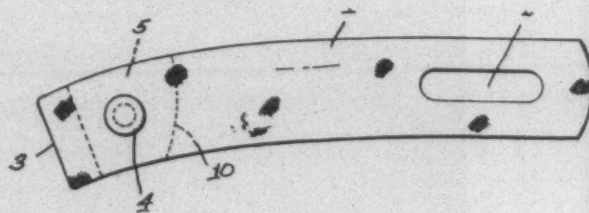
There will be a meeting of members only, at which every member will have an opportunity to swap opinions and viewpoints.

The following Committee on Resolutions has been appointed: Harvey W. Moore, chairman, W. L. Balthis, and J. E. Millis.

Patent On New Lug Strap Issued To Irving Bullard, Charlotte, N. C.

Irving Bullard, Charlotte, N. C., president of E. H. Jacobs Manufacturing Company, has recently been granted a patent on a new lug strap, as illustrated.

In tests at a large Southern cotton mill, Mr. Bullard says that it was proven that this shape and style of a canvas lug strap saved \$1.00 per loom per year as compared with conventional shaped straps because it sets higher on the picker stick, thus saving power to throw picker stick and shuttle.



The patent, No. 2,123,232, is described as follows:

A lug strap formed with a rounded heel portion and forwardly extending parallel arms, a heel plug fitted within said heel portion and between the said arms, the striking face of said plug having its extreme forward portion at the intersection of the plug and the uppermost part of the arms, said striking face extending from said forward point downwardly and rearwardly in the form of an arc with no part of said arc forwardly of its top portion, whereby chattering is eliminated in the operation of the lug strap.

Textile Building Approved By PWA

Raleigh, N. C.—The final project in N. C. State College's current \$1,400,000 building program has received approval of the Public Works Administration, Col. J. W. Harrelson, dean of administration, announced September 22nd.

With approval of the proposed new textile building, expected to cost \$300,000, all eight projects in the expansion program will be under construction by January 1st. A site for the new textile building will be selected soon by the faculty building committee.

Total of Cotton Used in August Gains Over July

Washington.—The Census Bureau reported cotton consumed during August totaled 561,406 bales of lint and 70,218 of linters, compared with 449,511 and 61,805 during July this year, and 603,617 and 72,088 during August last year.

Cotton on hand August 31 was reported held as follows:

In consuming establishments, 1,052,631 bales of lint and 270,281 of linters, compared with 1,266,983 and 268,225 on July 31 this year, and 958,887 and 189,043 on August 31 last year.

In public storage and at compresses, 9,825,616 bales of lint and 96,249 of linters, compared with 9,641,201 and 85,920 on July 31 this year, and 3,500,711 and 46,563 on August 31 last year.

Imports during August totaled 18,271 bales, compared with 25,047 during July this year, and 8,453 during August last year.

Exports for August were 200,851 bales of lint and 14,740 of linters, compared with 195,706 and 20,864 during July this year, and 220,415 and 24,779 during August last year.

Cotton spindles active during August numbered 22,152,526, compared with 21,916,166 for July this year, and 24,341,192 for August last year.

Cotton consumed during August including cotton-growing States 472,693 bales, compared with 381,306 during July this year, and 505,365 during August last year, and New England States, 72,870 bales, compared with 55,868 during July this year, and 80,629 during August last year.

Cotton on hand August 31 included:

In consuming establishments in cotton-growing States, 851,213 bales, compared with 1,037,161 on July 31 this year, and 733,266 on August 31 last year, and in New England States, 153,970 bales, compared with 174,025 and 180,761.

In public storage and at compresses in cotton-growing States, 9,757,377 bales, compared with 9,564,411 and 3,432,201, and in New England States, 56,527 bales, compared with 63,403 and 57,424.

Cotton spindles active during August included in cotton-growing States, 16,783,514, compared with 16,660,094 during July this year, and 17,763,478 during August last year, and in New England States, 4,755,728, compared with 4,684,796 and 5,853,390.

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—That Prevents Fly Waste and Split Ends

The swirling of the end in passing through the traveler produces smooth even yarn.

This in turn reduces the fly waste to a minimum in the Spinning and Twisting of Cotton, Wool, Worsted, and Asbestos, also reduces the number of split ends in the throwing of Real and Artificial Silks.

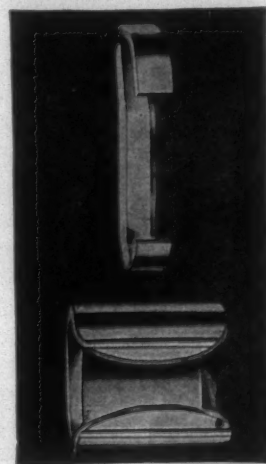
The Bowen Patented Bevel Edge

The Bowen Patented Vertical Offset

and

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BEVEL



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A Traveler for Every Fibre



A. B. Carter

Making Travelers in the South

By David Clark

A FEW YEARS AGO, I spent considerable time in New England, visiting the manufacturers of textile machinery and supplies and writing descriptions of the processes of manufacture.

The articles were published in *TEXTILE BULLETIN* under the titles, "Visiting the Shops" and proved to be very interesting to mill men who wanted to know more about the manufacture of the machinery and supplies which they purchased and used.

Among the "Visiting the Shops" articles were several dealing with the manufacture of ring travelers and as a ring traveler plant had recently been established at Gastonia, N. C., I felt that I should give them a write-up and give mill men an inside picture.

The fact that the Gastonia plant has been established by A. B. Carter, one of my oldest friends, added interest to the visit.

It was in 1899, while working in the old Ada Cotton Mills at Charlotte that I was approached by the *Southern and Western Textile Excelsior*, the only textile paper in the South at that time, with a proposition relative to writing their editorials. While my name was never published in connection with the journal, I did for more than a year write all of their editorials and in going to their office occasionally met a young subscription solicitor named A. B. Carter who had come originally from Bynum, N. C. The friendship formed then has lasted through the years.

In 1900, A. B. Carter left the *Southern and Western Textile Excelsior* to become overseer of spinning at the Lowe Manufacturing Company, Huntsville, Ala. and later accepted a similar position with the Avondale Mills at Birmingham, Ala.

In 1902 he accepted the position of superintendent of the Georgia Manufacturing Company at Whitehall, Ga., which position he held until 1910 when he resigned to become Southern Representative for the Victor Ring Traveler Company. The following year he added other lines of mill supplies and ever since then has been a prominent figure in the mill supply business of the South.

In 1920 he purchased the Boyce Weavers Knotter and today manufactures every part of same in his extremely modern machine shop at Gastonia, N. C.

In 1929 he purchased a cotton yarn mill at Lincolnton, N. C., and a year later purchased another yarn mill at

Taylorsville, N. C., where he now makes his home. His cotton mills have 20,000 spindles and manufacture super-carded single yarns 20's to 40's.

All of the Carter enterprises, the knotters, the mill supply business, the cotton mills and the new ring traveler plant are owned by A. B. Carter, Inc., which has a capital stock of \$750,000. A. B. Carter is president and treasurer while his son-in-law, E. Haines Gregg, who was formerly with the Armstrong Cork Company, is secretary. E. L. Ramsey, who has been with the A. B. Carter Company for 13 years, has charge of all manufacturing operations with the exception of the cotton mills. S. L. Haynes is his assistant and J. L. Craig acts as secretary and treasurer of the cotton mills.

A. Dewey Carter, son of A. B. Carter, and E. S. Kempton represent the mill supply business, including knotters and travelers, in Eastern North Carolina, Eastern South Carolina, Virginia and Tennessee. W. A. Hunt, who recently joined the organization, represents them in Georgia, Alabama and Mississippi.

A. B. Carter recently defeated two other candidates in the Democratic primary and will represent his county in the next North Carolina Legislature.

Learning that Mr. Carter was spending the day in Gastonia, I drove over about 10 a. m. and found him at his plant which is located a short distance beyond the Firestone Cotton Mills. After a short visit he turned me over to Plant Superintendent, E. L. Ramsey, who was given instruction to show me everything and I entered the shop with him.

Raw materials for travelers, whether steel or bronze, come in the form of round wire. The wire is manufactured and sold on specification relative to its chemical contents and as a check, samples of each batch are sent to professional metallurgists who analyze it and report whether or not it fully meets the specifications. The wire first passes through rolling machines which flatten and polish it. Experience dictates the size of the round wire which is passed through the rolling machines in order to produce a certain size traveler. For some travelers the wire goes through the rolling machines three times while for other travelers it is rolled four times. When the wire has been flattened and rolled to the exact size required for a certain size traveler, it goes to traveler cutters or formers where by automatic action the wire is fed forward and three jaws come together to cut off the

wire and at the same time give the traveler the exact shape desired. The machines work rapidly and there is a constant forming and dropping of travelers. There was a long line of these traveler cutters and some new ones have been recently added.

Beyond these were a line of tool-making machines, as A. B. Carter, Inc., make all of the tools used in the process of making their travelers and also the knotters.

On the other side were screw making machines which were at that time turning out with precision the very small screws used in the knotters and also automatic stamping and punching machines making the sides and other parts of the knötter.

The shop, although it does not cover a large area, was a model of efficiency, and it was easy to realize that Superintendent Ramsey knows his business when it comes to shop machinery.

Back of the main building is a small building containing the electric ovens in which the travelers are tempered.

The furnaces are of the latest type, and all have automatic pyrometer control; in fact, in order to insure accuracy the temperature is double checked with pyrometers.

After the hardening process the travelers are placed in carburizing furnaces for a specified number of hours. The process leaves the hardness but gives the travelers flexibility or life. The hardening and carburizing is handled with great care and the equipment is such as to insure great accuracy.

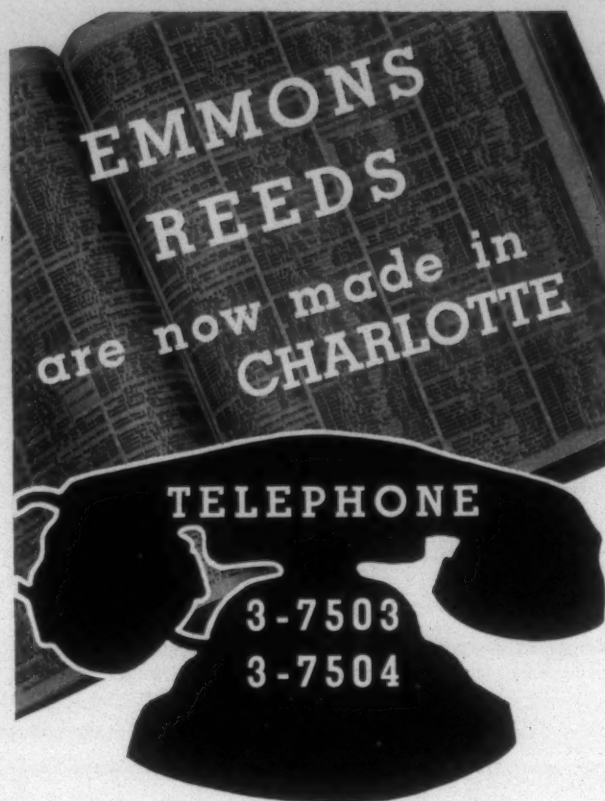
The travelers next go to a finishing and polishing room where they are placed in tumblers. The bronze travelers are tumbled with a special chemical preparation but they put into the tumblers with the steel travelers a most peculiar combination of hardened steel balls and points. The size of the balls and points depend upon the size of the traveler being polished. Travelers are usually put through three sets of tumblers and the polishing process usually takes 24 hours.

After the polishing process the travelers are given three very careful inspections with all inspectors using gloves so that any perspiration on their hands may not touch the travelers. One girl spreads the travelers out on a table and pushes aside any that do not appear perfect. Then another girl takes the same travelers and repeats the process. I picked up one traveler which had been pushed aside and found what was considered to be a defect was only a minute piece of lint. That illustrates the care used by the inspectors.

The last inspection is a careful weighing by a man who checks the weight and uniformity of all travelers.

Later they are put into attractive boxes and sent upstairs to the shipping and billing room.

As I stated in the beginning, I have known A. B. Carter for almost 40 years but I left his ring traveler manufacturing plant in Gastonia with an increased admiration for a man who could, at his age, launch an entirely new enterprise and so quickly establish it upon a thoroughly scientific and businesslike basis.



That's the number of EMMONS' new Charlotte plant (formerly the reed department of the Charlotte Manufacturing Company). Southern Mills can get fast delivery now on all types of Emmons Reeds.

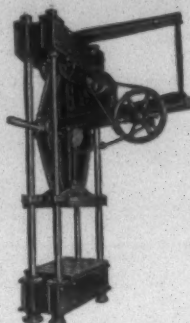
Remember: The resilient, strong Emmons dents are accurately spaced to within one one-hundredth of an inch . . . and each dent is uniform to within *one one-thousandth* of an inch. That makes for freer warp movement — and elimination of streaks that come from less accurately made reeds. The dents on these Emmons reeds are finely tapered and polished six times, to let good knots, slubs, and knits through easily.

Kept in stock: Steel Heddles with the "Certified" tag, and the Inspected & Approved Seal. Other loom harness equipment will also be available. For full particulars address Mr. George Field.

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 LAWRENCE, MASS.
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"CERTIFIED" STEEL HEDDLES

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Center of Screw.

Push Button Control—Reversing
Switch with limit stops
up and down.

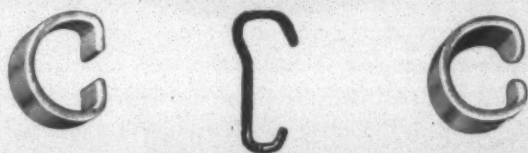
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Textile Operating Executives of Georgia Meet Oct. 8th

The fall meeting of the Textile Operating Executives of Georgia will be held at Georgia Tech, Atlanta, Ga., on Saturday morning, October 8, at 10 a. m. Slashing and weaving subjects, according to the questionnaire, will be discussed. A. D. Elliott, superintendent, the Trion (Ga.) Company, is general chairman of the organization; Allen Jones, superintendent, Muscogee Mfg. Co., Columbus, Ga., is vice general chairman. Robert W. Philip, editor of *Cotton*, Atlanta, is secretary-treasurer.

Harry H. Purvis, superintendent, Chicopee Mfg. Corp., Gainesville, Ga., will lead the discussion on slashing. W. H. Gibson, Jr., general superintendent, Martha Mills, Thomaston, Ga., will conduct the session on weaving and cloth room. This is the first time the cloth room has been given special consideration in the discussion, and it is expected this will augment attendance from men in this department.

Annual election of officers will take place at this meeting, and one member will be elected to the executive committee.

On Saturday afternoon, Georgia Tech will play Notre Dame at football, in one of the most important games of the year. Delegates to the textile meeting will witness the game in a special section in the stadium, all seats for which have already been taken.

Ginnings Total Three Million Bales On 1938 Cotton

Washington.—The Census Bureau reported cotton of this year's growth ginned prior to September 16th totaled 3,632,153 running bales, counting round as half bales and excluding linters. The Agricultural Department has reported the indicated cotton crop this year is 11,825,000 equivalent 500-pound bales.

Ginnings to September 16th last year totaled 4,261,165 running bales. In 1936 ginnings were 3,709,965 running bales.

Round bales, counted as half bales, totaled 37,813, compared with 66,400 last year, and 49,058 in 1936.

American-Egyptian cotton included totaled 1,931 bales, compared with 424 last year and 1,004 in 1936.

Ginnings in running bales, by States, to September 16th this year and comparative figures for last year were:

Alabama 349,683 bales this year and 350,638 last year, Arizona 29,893 and 14,464, Arkansas 346,272 and 274,998, California 2,176 and 2,576, Florida 17,794 and 19,374, Georgia 366,075 and 486,603, Louisiana 303,959 and 407,239, Mississippi 545,297 and 571,293, Missouri 52,987 and 21,570, New Mexico 459 and 3,139, North Carolina 24,467 and 29,982, Oklahoma 69,135 and 89,071, South Carolina 186,316 and 142,123, Tennessee 35,804 and 19,751, Texas 1,301,234 and 1,827,001, and all other States 602 and 713.

Mills Accept Cotton Bagging

The suitability of cotton cloth for covering cotton bales will have the best opportunity this year it has ever had for demonstration. The Department of Agriculture is making available sufficient cotton fabric patterns for bale coverings, at prices competitive with jute, to cover one million bales.

In order to make the plan work smoothly, a large number of cotton mills have already signified their willingness to purchase cotton on a net weight basis so that the cotton farmers will not suffer loss on account of lighter covering.

With cotton at 9c a pound, the extra allowance per pound on a net weight basis would be .41c. It works out this way for a bale that contains 478 pounds of lint cotton:

500 lbs. gross weight at 9c=\$45.00 per bale.

478 lbs. net weight at 9.41c=\$45.00 per bale.

The Department of Agriculture has published a table showing the allowance per pound for cotton in a range of prices between 5c and 21c per pound so that the premiums can be arrived at promptly and accurately.

Obviously neither the cotton farmers nor the mills lose in this handling of cotton on the net weight basis.

The following mills, which process about two million bales of cotton annually, have signified to the Cotton-Textile Institute their willingness to purchase cotton on a net weight basis and pay the net weight allowance above the quoted price of cotton:

Alabama Mills, Inc., Birmingham, Ala.; Androscoegin Mills, Leiston, Me.; Arcade Cotton Mills, Rock Hill, S. C.; Avondale Mills, Sylacauga, Ala.; Jos. Bancroft & Sons, Wilmington, Del.; Bates Mfg. Co., Lewiston, Me.; Bibb Mfg. Co., Macon, Ga.; Boaz Mill & Gin Co., Boaz, Ala.; Borden Mills, Inc., Kingsport, Tenn.; Brazos Valley Cotton Mills, West, Tex.; Brookside Mills, Knoxville, Tenn.; Cannon Mills Co., Kannapolis, N. C.; Carlton Yarn Mills, Inc., Cherryville, N. C.; Carolina Mills, Inc., Maiden, N. C.; Chiquola Mfg. Co., Honea Path, S. C.; Cleveland Mill & Power Co., Lawndale, N. C.; Climax Spinning Co., Belmont, N. C.; Cowikee Mills, Eufaula, Ala.; Cramerton Mills, Cramerton, N. C.; Dallas Cotton Mills Co., Dallas, Tex.; Dana Warp Mills, Westbrook, Me.; Dixie Mercerizing Co., Chattanooga, Tenn.; Drayton Mills, Spartanburg, S. C.; Durham Cotton Mfg. Co., Durham, N. C.; Eagle Yarn Mills, Inc., Belmont, N. C.; Edwards Mfg. Co., Augusta, Me.; Erwin Cotton Mills, Durham, N. C.; Exeter Mfg. Co., Exeter, N. H.; James S. Gary & Sons, Baltimore, Md.; Georgia-Kincaid Mills, Griffin, Ga.; Gossett Mills, Anderson, S. C.; Hannah Pickett Mills, Rockingham, N. C.; Hanover Mills, Inc., Gastonia, N. C.; Hill Mfg. Co., Lewiston, Me.; Hill Spinning Co., Roseboro, N. C.; Indiana Cotton Mills, Cannelton, Ind.; Inman Mills, Spartanburg, S. C.; A. D. Juilliard & Co., Aragon, Ga.; Locke Cotton Mills Co., Concord, N. C.; Lola Mills, Inc., Stanley, N. C.; Lily Mills Co., Shelby, N. C.; Marshall Field & Co., Spray, N. C.; Mexia Textile Mills, Mexia, Tex.; Monument Mills, Housatonic, Mass.; Moultrie Cotton Mills, Moultrie, Ga.; Nashua Mfg. Co., Boston, Mass.; Naumkeag Steam Cotton Mills, Salem, Mass.; Norris Cotton Mills Co., Catechee, S. C.; Oxford Cotton Mills, Oxford, N. C.; Pacific Mills, Boston, Mass.; Peerless Spinning Corp., Lowell, N. C.; Pepperell Mfg. Co., Boston, Mass.; Pepperton Cotton Mills, Jackson, Ga.; Postex Cotton Mills, Post, Tex.; Profile Cotton Mills, Jacksonville, Ala.; Proximity Mfg. Co., Greensboro, N. C.; Repub-

(Continued on Page 31)

REALIZE THE HOW TO SAVINGS POSSIBLE FROM MODERN COTTON YARN MAKING METHODS

One-process picking, long-draft roving, and long-draft spinning, by greatly reducing the number of operations, have effected important POTENTIAL savings in making cotton yarns. However, if operations are reduced at the expense of QUALITY, these savings are not realized.

In order to make these savings a REALITY each individual machine must be made to perform at its BEST,—ALL of the time. This is particularly true of the card, since reduction of doublings in subsequent processes makes evenness at this point highly essential.

Superior performance by your cards depends on proper card maintenance and a sure way to properly maintain your card clothing and allied products is to REGULARLY use the ASHWORTH Card Clothing Survey.

This survey is made by practical card men who use a check list so that nothing escapes them. Their recommendations are conservative and are made in such a way that you can budget your repairs over a period of time, so the expense will not be burdensome.

And, as always, Ashworth means card clothing satisfaction to you, its 3 factories assuring an uninterrupted supply of Ashworth products, its 6 repair shops facilitating prompt and efficient reclothing service and its 7 distributing points making Ashworth products readily available.



ASHWORTH BROS., INC.

Woolen Division: AMERICAN CARD CLOTHING CO.

FACTORIES in Fall River, Worcester and Philadelphia; SALES OFFICES AND REPAIR SHOPS in Charlotte, Atlanta and Greenville; SOUTHWESTERN REPRESENTATIVE: Textile Supply Company, Dallas, Texas.

PRODUCTS AND SERVICES: Card Clothing for Cotton, Wool, Worsted, Silk and Asbestos Cards and for All Types of Napping Machinery . . . Brusher Clothing and Card Clothing for Special Purposes . . . Lickerin Wire and Garnet wire . . . Sole Distributors for Platt's Metallic Wire . . . Lickerins and Top Flats Reclothed at All Plants.

Vigorous Opposition Shown To Proposed Change in Futures Contracts

Washington.—Responding to requests from Southern cotton manufacturers the Department of Agriculture plans to hold hearings in October on the proposal to amend cotton futures contracts to permit delivery of staples in varied lengths at fully quoted premiums, it was learned recently.

The Southern Combed Yarn Spinners' Association of Gastonia, N. C., in a circular letter to its members, has joined the list of cotton manufacturers' associations to announce opposition to the proposal.

This petition, coupled with similar action by other manufacturers groups in all sections of the South, led department officials to the decision that arguments for and against the proposal, advanced by the American Cotton Shippers' Association and the American Cotton Co-operative Association should be fully aired.

Amendment of cotton futures contracts to permit delivery of staples in lengths 1/32" between 7/8" and 1/16" staples, inclusive, as proposed by these two groups, would be "disastrous," manufacturers' spokesmen declare. The proposal has been disapproved, accordingly, by the cotton committees of the American and the National Cotton Manufacturers' Associations, and by the North Carolina and Georgia Cotton Manufacturers' Associations, in addition to the Southern Combed Yarn Spinners' Association.

Frank J. Knell, president of the New York Cotton Exchange, is arranging a preliminary meeting of manufacturers and small shippers in either New York or Washington early in October, for a round table discussion, prior to the hearings before the Department of Agriculture, it was reported.

Opponents of the proposal declare it would seriously lower the value of cotton futures contract and would give speculators a wider range of activity.

The plan was first advanced more than a year ago, but concerted opposition on the part of many manufacturers' groups is said to have caused the dropping of the plan. It is now reported that certain large cotton merchants have been conducting a campaign to gain approval of the changes from individual mill executives.

This action is being taken, it is said, to avoid collective action by the industry as a whole where vigorous opposition is certain to be registered.

Spurred by reports of this activity, the Southern Combed Yarn Spinners' Association, in its letter, asks for "fuller co-operation and assistance in the co-ordinated efforts that are being made by our association and others to defeat this proposal."

The resolution, adopted by the association at its annual meeting on September 8th, is a duplicate of that approved by the Georgia Cotton Manufacturers' Association, and charges that the proposed change would operate to the "direct disadvantage" of cotton farmers, manufacturers and all divisions of the trade with the exception of a few large cotton merchants.

As received by Secretary of Agriculture Henry A. Wallace, the resolution reads:

"Whereas, It has been proposed by the American Cotton Co-operative Association, the American Cotton Asso-

ciation, and several large cotton merchants, in a petition presented to the New York Cotton Exchange and to the New Orleans Cotton Exchange, that existing regulations be changed to permit the delivery of staples in lengths 1/32" between 7/8" and 1 1/16" staples, inclusive, at fully quoted premiums, and

"Whereas, We feel that the proposed changes would react to the direct disadvantage of cotton farmers, cotton manufacturers, and all other divisions of the cotton trade, with the exception of the few large cotton merchants who handle and control the major part of all certificated stocks, and

"Whereas, It is our opinion that the proposed changes would be especially detrimental to the cotton manufacturers, because as a result, the value of the futures contract would be lowered, and

"Whereas, There is every reason to believe that instead of accomplishing the objectives outlined in the petition, the proposed changes would make it possible for a few larger cotton merchants to control and manipulate the futures market to their own advantage.

"Therefore, be it resolved, That we, the members of the Southern Combed Yarn Spinners' Association, do hereby register our vigorous opposition to the proposed changes outlined above, and

"Be it further resolved, That our protest against these changes be placed before the proper agencies and authorities who have jurisdiction over the futures contract, with the urgent request that a public hearing be had at which all parties interested in any way in such proposed changes may be given adequate opportunity to express their views and explain their objections to such changes, before any action toward adoption be taken, and

"Be it further resolved, That copies of this resolution be immediately transmitted to the Secretary of the U. S. Department of Agriculture, to the proper officials of the Commodities Exchange administration, and to the New York and New Orleans and Memphis Cotton Exchanges, and that the members of our association be requested to express their individual approval of this resolution, to the several members of the exchanges with whom they do business."

Vocational Trade and Industrial Education Conducted in North Carolina Mills During the year 1937-38

During the past year, vocational training in textiles in North Carolina has continued to gain, with the following mills conducting work along these lines:

Haw River—Granite Finishing Works, Tabardrey Mfg. Co.

Bladenboro—Bladenboro Cotton Mills.

Enka—American Enka Corp.

Henry River—Henry River Mills Co.

Valdese—Valdese Mfg. Co.

Concord—Cannon Mills Co.

Kannapolis—Cannon Mills Co.

Rhodhiss—Rhodhiss Mills Co.

Hickory—A. A. Shuford Mills Co., Hickory Spinning Co.

Lexington—Wenonah Cotton Mills Co.

Cooleemee—Erwin Cotton Mills.

Durham—Erwin Cotton Mills.

Winston Salem—Arista Mills Co.

Belmont—(Several students from each of the mills listed below made up the classes.) Sterling, Crescent, Imperial, Climax, Acme, Stowe Spinning, Perfection, Linford.

Cramerton—Cramerton Mills, Inc.

Gastonia—Firestone Cotton Mills, Inc.

Lowell—National Weaving Co., Peerless Spinning Co., United Spinners Co.

Ranlo—A. M. Smyre Mfg. Co.

Greensboro—Proximity Mfg. Co., Proximity Print Works, Revolution Cotton Mills, White Oak Cotton Mills.

Moorestville—Moorestville Cotton Mills.

Marion—Marion Mfg. Co.

Charlotte—Chadwick-Hoskins Co., Highland Park Mills.

Paw Creek—Kendall Mills Co.

Pineville—Chadwick-Hoskins Co.

Rockingham—Hannah Pickett Mills.

Spray—Marshall Field and Co.

China Grove—China Grove Cotton Mills.

Salisbury—Cannon Mills Co., Cartex Mills, Inc.

Alexander—Alexander Mfg. Co.

Avondale—Cliffside Mills.

Cliffside—Cliffside Mills.

Forest City—Florence Mills.

Spindale—Spencer Mills, Inc.

Albemarle—Efird Mfg. Co.

Elkin—Chatham Mfg. Co.

Monroe—Union Mills Co.

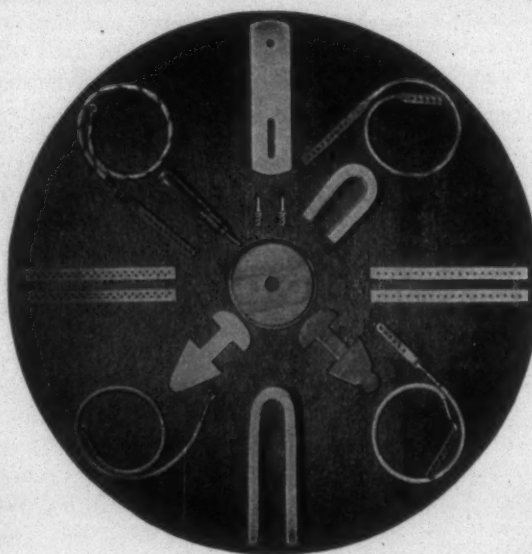
A total of 4,626 persons were enrolled in these classes.

In addition to the 269 Textile Classes a Day Trade Textile School has been established by the Marshall Field Company at Spray, N. C. J. T. Lathem is the director and he has three part-time assistants. This school offers courses in carding, spinning, weaving and designing and runs for nine months in the year.

The student body is composed of three groups, two from the mills and one from the high school. Each group spends three hours per day in school; part of the time in class room studying technical and related subjects and the remainder of the time out in the shop working on the different machines.

The program conducted the past year was the largest since the work was started in North Carolina.

Rice Dobby Chain Co.



Millbury Massachusetts



A little means a lot

Because travelers cost so little to buy, don't overlook their importance in your entire production cost.

The right traveler for the job can boost up doffs per day and improve the quality of the yarn. That's why so many successful mills use Victor Travelers.

Send for a FREE trial supply and see for yourself how they smooth out spinning room troubles.

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Gastonia, N. C.
Tel.—247

Personal News

Mark H. Crowder, formerly with the United States Rubber Company mill at Hogansville, Ga., has recently accepted the position of superintendent of the J. W. Sanders Cotton Mills No. 3, at Meridian, Miss.

J. R. Hodge has been elected president of the Greenville, Miss., Cotton Exchange. N. C. Skinner was elected vice-president, and J. G. Lulk, secretary-treasurer.

Stuart H. Sherman, formerly superintendent of the Trenton Cotton Mills, Gastonia, N. C., has gone to Winnsboro, S. C., where he has assumed new duties as technical superintendent of the unit there of the United States Rubber Products, Inc., known as the Winnsboro Mills.

Don Johnston, of the Vamoco Cotton Mills, Franklin, N. C., recently returned from a two months' trip abroad.

Donald Comer, Avondale Mills, was a guest speaker at the recent annual meeting of the Southern Garment Manufacturers' Association, held in Atlanta, Ga. His subject was, "The Report of the National Emergency Council on the South."

Richard Edge, president of the Charleston (Tenn.) Hosiery Mill, has been chosen president and general manager of the Kenosha Full-Fashioned Mills, Inc., Kenosha, Wis. Mr. Edge has been in the hosiery business since 1910.

C. E. Gore, formerly associated with the Lincoln Mills of Huntsville, Ala., has been named superintendent of the Fickett Mills, Inc., Whitehall, Ga. This plant was formerly known as Whitehall Mills unit of the Oconee Textile Company.

Robert C. Revel, formerly of High Point, N. C., is now connected with the Eastman Cotton Mills, Eastman, Ga.

H. J. Murphy has assumed new duties as superintendent of the Reynolds, Ga., plant of the Bibb Manufacturing Company.

E. O. Steinbach, vice-president and general manager of the Forest City, N. C., plant of the Florence Mills, is reported to be getting along satisfactorily after a recent heart attack.

John A. Simmons, Lanett Bleachery & Dye Works, spoke on "Finishing and Dyeing Processes" at the recent meeting of the Southern Garment Manufacturers' Association, held in Atlanta, Ga.

E. B. Worth Represents Louis Allis Co.

Charlotte, N. C.—Announcement of the appointment of Eugene B. Worth as district representative for the Louis Allis Company has been made here and Mr. Worth has opened an office at 215 Builders' Building, Charlotte.

The Louis Allis Company is a widely known and recognized motor manufacturer, having been in the field for more than 35 years, and manufactures electric motors exclusively in a wide range of types, sizes and characteristics.



E. B. Worth

Mr. Worth is an experienced sales engineer, having been connected with Allis-Chalmers Manufacturing Co. for a period of six years following his graduation from N. C. State College. During 1935 and 1936 he traveled

North and South Carolina for Allis-Chalmers. More recently he was connected with the Mengel Company, Louisville, Ky., which position he resigned to open an office here.

Other industrial equipment accounts which Mr. Worth will represent include Dean Hill Pump Company, The Mercon Regulator Company, Clees Valve and Engineer-Company, and Electro Lift, Inc. He will also have an arrangement for selling Gates Vulco Rope V-Drives and Variable Speed Transmission Equipment.

COMING TEXTILE EVENTS

OCTOBER 8

American Association of Textile Chemists and Colorists, Piedmont Section, Charlotte Hotel, Charlotte, N. C.

Textile Operating Executives of Georgia, Semi-Annual Meeting, Atlanta, Ga.

OCTOBER 10-14

Silver Jubilee Safety Congress, auspices of National Safety Council, Stevens Hotel, Chicago. Textile Section, October 11 and 13, 2 P. M.

OCTOBER 15

Eastern Carolina Division of the Southern Textile Association, Erwin Auditorium, West Durham, N. C., 9:45 A. M.

OCTOBER 19-21

Carolina Yarn Association, Annual Get-Together, Carolina Inn, Pinehurst, N. C.

OCTOBER 26

Cotton-Textile Institute, Annual Convention, at the Waldorf-Astoria Hotel in New York City.

DECEMBER 2-3

American Association of Textile Chemists and Colorists, Annual Meeting and Convention, Atlanta, Ga.

W. D. Anderson, president of Bibb Manufacturing Company, Macon, Ga., was a guest speaker at the annual convention of the Southern Garment Manufacturers' Association held recently. He spoke on "The South's Industrial Problems."

W. J. Vereen, head of the Riverside Manufacturing Company, Mountrie, Ga., was recently re-elected president of the Southern Garment Manufacturers' Association, at their annual meeting.

Jack Rhymer, formerly with Dary Ring Traveler Company, has been made superintendent of plant No. 4 of the Chadwick-Hoskins Company, Charlotte, N. C.

James H. Porter, chairman of the board of directors of the Bibb Manufacturing Company, Macon, Ga., is returning to the United States after a visit to Britain, Ireland and France.

C. E. Willis, formerly of Laurel Hill, N. C., is now overseer of carding at the Worthen Bag Mills, Nashville, Tenn.

H. Fletcher Brown, vice-president of the E. I. du Pont de Nemours & Co., has given \$200,000 to the University of Delaware in order that the institution may be able to accept a PWA grant to help pay the cost of a \$410,000 administration and classroom building.

W. H. May, president of May Hosiery Mills, Inc., was honored recently by the Burlington Exchange Club, when his name was inscribed as the first one in the "Book of Golden Deeds," a volume dedicated to outstanding contributions in fields of service.

Rudolph Harrington has been promoted from the position of technical superintendent of the Winnsboro (S.C.) mills of the United States Rubber Products, Inc., to general superintendent of all their Southern mills with his headquarters at Hogansville, Ga.

S. H. Jordan has accepted the position of second hand in the weave room at the Radford (Va.) Weaving Company, a unit of the Burlington Mills Company.

R. L. Loven, formerly superintendent of the Adair Hosiery Mills, Clinton, S. C., is now connected with the G. & H. Hosiery Mills at Hickory, N. C.

(Continued on Next Page)

HOUGHTON STANDARD TOPS

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Write or Phone Our Southern Representative

JAMES E. TAYLOR, Phone 3-3892 Charlotte, N. C.

Twenty Years Ago This Month

The following are excerpts from the Textile Bulletin of September 19th and 26th, 1918:

PERSONALS

H. D. Barrett has accepted a position with Imperial Overhaulers, Greenville, S. C.

J. G. McNeill, from Edgefield, S. C., has been appointed overseer of weaving at Greenwood (S. C.) Cotton Mills 1 and 2.

W. T. Royster has resigned as overseer of carding at Draper, N. C., to become superintendent of the Morehead Mills, Spray, N. C.

J. R. Killian, who recently resigned as superintendent of the Cannon Mills, Concord, N. C., has been appointed divisional inspector in the cotton goods department of the South, under depot quartermaster department at Atlanta, Ga.

GOVERNMENT TO FIX COTTON PRICES

Washington, Sept. 23, 1918.—First steps looking toward the fixing of prices for standard grades of raw cotton were taken today by the government. . . . Before the War Industries Board made public the personnel of the committee, senators and representatives from the Southern cotton-growing States met with members of the Cotton States Marketing Board to discuss the proposed price-fixing. The conference adopted a resolution setting forth that it opposes price-fixing in principle and appointed a committee of inquiry in an effort to convince them that price-fixing was not necessary.

(If they could only have looked into the future.—Ed.)

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FOR ALL
TEXTILE PURPOSES

Manufactured by
Clinton Company
CLINTON, IOWA

QUALITY

SERVICE

Robert F. Craig, treasurer of the Lola Mills, Inc., Stanley, N. C., has recently been granted a patent covering a waxing invention to be used on winders.

Jacob F. Schaeffer, overseer of spinning at Patterson Mills Company, Roanoke Rapids, N. C., died suddenly of a heart attack September 18th. Interment was at Concord, N. C.

W. E. Poovey, proprietor of the Granite Hosiery Mills, Granite Fall, N. C., who has had a serious illness, extending over a period of four months, is reported to now be upon the road to recovery.

Arthur W. Bachman has been added to the Southern sales force of Geo. B. Pfingst, Inc., and will have his headquarters in the Guilford Bank Building, Greensboro, N. C. John P. Reynolds of Gainesville, Ga., represents the company in the Georgia and Alabama territory.

Dayton Rubber Mfg. Co. Appoints J. O. Cole in the South

The Textile Products Division of the Dayton Rubber Manufacturing Company, Dayton, Ohio, has announced the development of several special textile products now available, and simultaneously have announced the appointment of J. O. Cole as sales representative and field engineer for these products in the South.

Mr. Cole, a graduate in textiles from Georgia Tech, has been associated for several years with one of the larger Akron rubber companies. Previous to that he had mill experience with Tennessee Eastman Corporation and Standard-Coosa-Thatcher Company.

Mr. Bacon, development manager of Dayton's Textile Products Division, is a graduate in chemistry from Reed College, Portland, Ore. He has had twelve years rubber



H. M. Bacon



J. O. Cole

experience, eight years specializing in textiles with several of the large rubber companies, the last five and one-half years with Denman Rubber Company. Mr. Bacon has developed and patented several types of rubberized fabric pickers and lug straps.

The company has a complete line of loop pickers for Draper looms, and a limited line of sizes on reversible drop box pickers for Crompton & Knowles looms, as well

as a complete line of bunters and bumpers and lug straps for all looms. The line includes two types of rubberized fabric hold-ups, one a regular die-cut hold-up and the other a full molded hold-up for especially heavy service and requirements.

Dayton announces also that the department is conducting tests on a new type of loom checking mechanism, cam rollers, spinning cots and other products which will be offered as perfected.

B. E. Dodd With Dixie Chemical Products Co.

Byron E. Dodd is now associated with the Dixie Chemical Products Company, Ltd., of Birmingham, Ala., in the capacity of Southwestern manager of the Textile and Metallurgical Division. He will have headquarters at New Orleans, La., mail address, P.O. Box No. 928, and will have charge of the sales of Textiles and Metallurgical products in Louisiana, Mississippi, Arkansas, Texas and West Tennessee territory.

H. Reid Lockman Joins Dary Ring Traveler Co.

H. Reid Lockman, formerly assistant overseer of spinning at Beaumont Manufacturing Company, Spartanburg, S. C., has resigned to become sales representative for Dary Ring Traveler Co., Taunton, Mass., making his headquarters in Spartanburg, S. C.

C & G Chemical Company Organized

J. F. Campbell has organized the C & G Chemical Company of Charlotte, N. C., to manufacture and distribute his own Boiler Treatment, Rust Remover and Humidifier Cleanser. Mr. Campbell is well known in this line of endeavor, having been associated for a number of years with the North American and later with a local concern, making and distributing these products.

Mr. Campbell's products will be made in Charlotte, N. C., with offices at 301-302 Builders Building.

Branch of E. H. Jacobs Mfg. Co. to Move to Charlotte

W. Irving Bullard, president of the E. H. Jacobs Manufacturing Company of Danielson, Conn., is completing plans to move his Johnson City, Tenn., plant to Charlotte, N. C., because of the many advantages for transportation and manufacturing.

The Jacobs Company, which manufactures necessities for cotton mills out of raw materials produced in North Carolina, will bring a substantial payroll to Charlotte, Mr. Bullard said, and will make possible lower prices for hardwood parts because of savings in transportation.

The factory makes picker sticks, skewers, wood lug straps, dobby sheaves, and top clearer boards.

The Danielson company, which has been in business since 1869, manufactures canvas and leather attachments for cotton, woolen, silk and carpet looms. Most of the products of the company are based upon inventions of the president's.

"Industry continues to trek to North Carolina," com-

mented Mr. Bullard, who has been a resident of Charlotte for the past six years. "As a distributing center for manufacturers and merchants, the city has little competition in the South. Transportation by railroads, express and motor trucks offer advantages that cannot be equalled anywhere South of the Mason Dixon line."

Mr. Bullard, besides his textile and manufacturing interests, was organizer and president of Colonial Air Transport, one of the first aviation companies in the country. He is former vice-president of the Merchants National Bank of Boston and of the Central Trust Co. of Chicago. He served as vice-president of the Boston Chamber of Commerce for four years. Mr. Bullard is the author of several books on economics.

Eastern Carolina Division S. T. A. To Meet At Durham, Oct. 15th.

The regular Fall meeting of the Eastern Carolina Section of the Southern Textile Association will meet at 9:45 a. m. at the Erwin Auditorium, West Durham, N. C., October 15th. The meeting will start promptly at this hour to insure the expected crowd ample opportunity to get lunch and be in Duke Stadium in time for the Duke-Georgia Tech game.

The subject for discussion is to be: Cloth Imperfections and Their Causes. This discussion will be handled from the weaver's viewpoint using cloth samples to illustrate troubles arising in each, the carding, spinning, winding, warping, dying, slashing and weaving departments.

In harmony with this subject, a representative from the Draper Corporation will be present for a talk on "The Upkeep of a Loom."

All weavers in this section are asked and expected to bring samples of cloth showing defects caused either at the loom or in the various preparatory processes. It is further requested that carders, spinners, etc., bring samples of their particular process which are calculated to make seconds.

It will be especially appreciated if the weavers and preparatory overseers will co-operate in making samples with defects of known cause.

The samples will be on display for inspection and analysis by all present. It is the opinion of the Executive Committee that this discussion will be of intense interest to yarn mill representatives.

The following question will be considered for discussion: What treatment can be given raw stock dyed rayon staple to restore its working qualities as in its natural state?

Lunch will be served in the cafeteria of the Erwin Auditorium, 12 o'clock, 50 cents per plate.

Troubles to be discussed include the following:

Weaving—Kinky filling, jerked-in filling, ropy filling, floating threads, break out, dobby balks, thick places, thin places, mispicks.

Slashing—Double end, drawback, loose ends, hard size. Dyeing—Spots, streaks, off shades.

Wind and Warping—Slugs, kinks, knots, oily threads.

Spinning—Uneven yarn, big end, mock twist, cockled yarns, gouts.

Carding—Clearer waste, oily roving, doubling.

WENTWORTH

Double Duty Travelers



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(Pronounced "Si-Co")

Anything in great demand has a host of imitators—including SEYCO. Since you can get the real thing why not do so? By using the finest materials, from various parts of the world and scientifically compounding them, we can furnish a sizing that won't turn rancid, damage fibers or give trouble in storage, dyeing, bleaching and finishing. Thus controlled quality, uniformity and dependability!

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Our well equipped chemical staff directed by Dr. Seydel, a renowned chemist (honored by American Chemical Society as Councillor, etc.) will help you with your Sizing and Finishing problems.

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TEXTILE BULLETIN

Member of

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Ellis Royal - - - - Associate Editor

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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Shall There Be War?

As this is written, it is our guess that there will not be war but even before this issue comes from the press, Europe may be hearing the roar of big guns and the explosion of bombs dropped from the air.

The other World War began with one pistol shot and as we face the situation today we realize that one pistol shot, one through the heart of the madman of Europe, Adolf Hitler, could avert a second World War.

It may be strange to wish for an assassin but a World War will mean death and suffering to several million human beings, and if the death of one man could avoid such a catastrophe, we care not what would be the means towards that end or how great the crime.

It is our guess that Hitler is bluffing and that before the end of the week, he will accept some compromise, but if he does plunge the world into another war, it must and will be the end of Germany, for the world can not permit the existence of any country if it keeps its eyes always on war and conquests.

It is unfortunate that in this struggle England and France will find itself upon the side of the communists of Russia and still more unfortunate for us, because we will probably be drawn into the struggle.

Waste Dealers Scandal

While very little, in fact, practically nothing, has appeared in the public press, there has been a great stir in cotton mill circles over the alleged discovery that certain waste dealers, who were supposed to be selling mill waste upon a commission basis, have been making large profits in excess of their agreed commissions.

Practically all of the parties, mentioned in connection with the complaints, have offices in Charlotte, although there is said to be one connecting link at Greenville, S. C., and another in New Jersey.

Under the plan which, it is said, had been built up and which had been in existence for a considerable period of time, the so-called commission waste dealers would make a contract with a mill to handle their output upon a commission basis and, as waste is a necessary evil to a cotton mill, many managers liked the commission agent system because it relieved them of having to keep posted upon waste prices.

Formerly many mills had signed yearly contracts at fixed prices or based upon the price of cotton but too many had found that often the yearly contracts were nothing more than options and that when waste prices declined, the dealer would claim that the waste was of a lower grade than when the contract was signed, and as it was difficult to grade waste, there were usually substantial reductions or cancellation of contracts.

Having learned that the yearly contract was in most cases nothing more than something upon which a waste dealer could make a profit in case prices advanced, the mills welcomed a new system under which they were to have their waste sold at market prices and pay a fixed commission as compensation for services rendered.

Having adopted what they thought was a sane method of selling their waste and having confidence in the commission men with whom they made the contracts, many mill managers promptly forgot their waste sales problem and went to sleep, and it was only recently that there was a rude awakening.

According to the story, as it comes to us, a certain waste dealer discharged one of his employees and the discharged man, believing that he had been mistreated, proceeded to "spill the beans."

We are told that he presented to several mill managers copies of invoices showing that their waste had been sold at prices considerably above those which had been reported to them and upon which they had paid the agreed commission. One mill manager insisted that the charges

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Good lighting conquers visual strain, it makes work safer, makes surroundings cheerier, and ends the nervous tension that comes from eye fatigue. Employees *see* better, *think* better, *feel* better and *work* better when lighting is engineered to the job. It's one efficiency item that everybody welcomes... At the end of a shift in the well-lighted plant, employees leave their work clear-eyed, visually fit for hours of recreation and home life.

Now, too, with the new Cooper Hewitt* Lamps "high seeability" lighting is less expensive than ever before. Plants where costs are known down to the last penny are installing Cooper Hewitts right now—as a means of spreading slim modernization budgets wisely as well as widely throughout the plant.

Why not discuss the possibilities of similar gains in your own plant with a representative who knows the economics as well as the engineering of modern industrial lighting? General Electric Vapor Lamp Company, 895 Adams Street, Hoboken, New Jersey.



*The new Cooper Hewitt starts instantly... hangs horizontally... gives the same output from 22% less wattage than previous types. It provides a soft, detail-revealing light for non-fatiguing seeing.



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SERVICE

Our supply of CARTER TRAVELERS is kept at a level sufficient to meet promptly the needs of our customers, but we carefully guard against an accumulation of excessive stocks. This reserve supply is constantly being replaced, and there is not a traveler in our plant today that was made prior to April this year. As the result, when you buy CARTER TRAVELERS, you are ALWAYS assured of getting freshly made goods, with the full, true temper that is such a vital factor in good running work.

The location of our manufacturing plant in the heart of the South enables us to give quick delivery of special travelers so often needed by the mills during this day of frequent changes and styles. Our plant technicians and traveling representatives are at your service day and night.

**Longer Life — Better Running
They'll Reduce Your Traveler Costs**

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Behind Carter Travelers is the experience of a man who has been identified with the traveler industry for 25 years and textile manufacturing for a similar period.

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Dallas, Texas

SOUTH CAROLINA

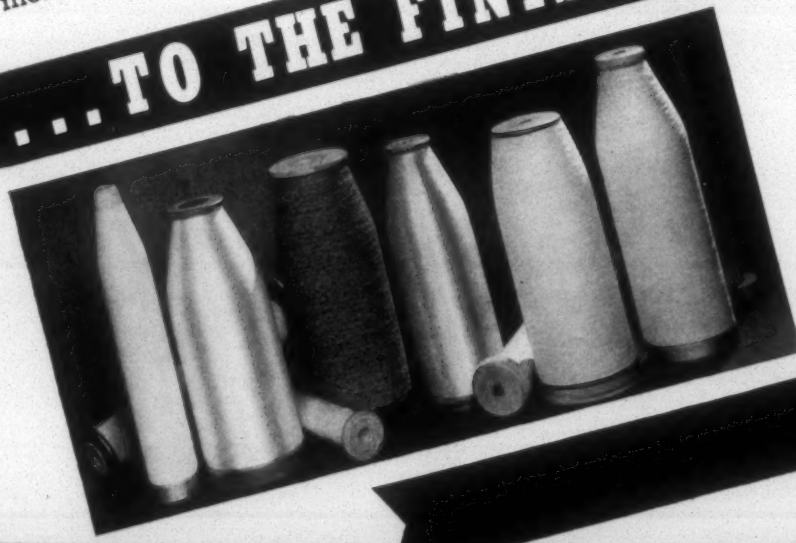


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. . . TO THE FINISHED YARN



WHITIN MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C.

ATLANTA, GA.

could not be true, as he had every confidence in his waste commission merchant and frequently played golf with him, but when an attorney approached that waste dealer, with the statement that he could take his choice between a criminal or civil suit, he promptly signed a check for the difference between the amount which he had received for the waste and that which he had reported to the mill.

It is reported to us that another mill which demanded settlement received notes aggregating approximately \$10,000 and satisfactorily secured.

In another case a waste dealer who had been asked for an accounting, could not or would not produce his books and all last week parties who had purchased waste from him were, under subpoenas, appearing before a commissioner in Charlotte and filing the invoices which they had received from the waste dealer, thereby establishing the prices he had been paid.

We also hear that other mills, which have been confident that they had received the full prices secured by their waste dealers, are now awakening from their sleep and demanding an accounting.

It would almost appear that there was a ring or organization which was working a waste racket and that there was an established system of co-operation in gyping the mills.

Under one plan, which is said to have been in operation, a mill would receive an order to ship a certain number of bales of waste to a customer whose title would indicate that he was a utilizer of waste.

It is reported to us that one of the names used was that of a former utilization company in a Northern State but that the company had been out of business for several years. It is charged that the waste dealer kept one man in that town who received the invoices mailed, to the defunct company, and paid for them with the waste dealer's checks.

Whether the waste was shipped to that alleged fictitious consumer or one in Charlotte, it was said to have been promptly reshipped, at higher prices, to actual consumers and the so-called commission merchant is said to have pocketed the difference in price plus the commission which the mill had agreed to pay him for the sale of its waste.

According to report, the waste dealers would, at times, that is, when they anticipated a decline, sell large quantities of waste short and after the decline they would deliver the mills waste, upon their own contracts, through the system of wash sales as outlined above. Some of them ease their consciences by claiming that

such was a legitimate proceeding but the fact remains that they were selling their customers waste to themselves and receiving a commission for same and that they were the sole judge of the price which they should pay.

We are told that while the above system was the one most used in gyping the mills, there were two other systems.

Under one, waste was shipped and billed to a firm which did commission cleaning or conversion. The mill was given the idea that the cleaner was buying the waste and accepted payment and paid the commission upon the price named whereas the waste dealer owned the waste all the time and sold it after it was cleaned. By naming a low price when the mill shipped the waste to the cleaner, he was able to make additional profits. The mill was, of course, entitled to the full price paid for the waste whether sold before or after cleaning. It is reported, and we think can be proved, that some of the commission cleaners knew exactly what was being put over the mills but kept quiet because they were making a profit out of cleaning the waste.

Another system, which is said to have been the most profitable of all, was said to have been that of "you tickle me and I will tickle you." Under that plan one waste dealer would sell to another dealer a certain amount of thread waste, from the mills for whom he sold on commission, at a price below its real value, upon the condition that the second dealer would sell him a certain amount of strips from the mills he represented, at an equal number of dollars below its value.

Each dealer would have his mills ship the product sold and receive his commission and both of them would profit by having purchased waste below its true value.

It is reported to us, but lacks verification, that one of these so-called commission merchants had already made \$87,000 this year.

There are many honest men in the waste business and some of those who have handled waste upon a commission basis have played absolutely square with their mills and we would regret it if this exposure threw any suspicion upon them.

On the other hand it does appear that cotton mills have been the victim of a waste racket which had many ramifications and which has been exceedingly profitable to certain dealers.

These men approached mills with the statement that they were willing to sell their output of waste upon a strictly commission basis and that as the agents for the mill they would obtain the best possible prices and that all they would receive for their services would be the agreed commission.

They have been guilty of dishonest practices.

Mill News

ALEXANDER CITY, ALA.—The Russell Manufacturing Company are changing over 40,000 spindles to long draft and are also changing 30 roving frames to long draft. The work is being done by the Saco-Lowell Shops of Biddeford, Me.

VICTORIA, VA.—Operation on silk goods has been begun by the Hanover Broad Silk Works, an affiliate of the Petersburg Textile Corporation of Petersburg, Va. Julius Descheemacher, Jr., son of the vice-president and superintendent of the Petersburg plant, is superintendent of the plant here.

TRYON, N. C.—The new branch plant of the Adams-Millis Corporation, silk hosiery manufacturers of High Point, N. C., is now in partial operation just outside the Tryon city limits.

Full production schedule is expected to be reached by January 1st, officials announced. The output of the mill then will be approximately 3,500 dozen pairs of hose a week.

G. C. Furr, of High Point, is general manager of both the High Point and the Tryon plants. E. M. Armfield, his assistant, is in direct charge of the Tryon plant. Mr. Furr will divide his time between the two mills.

SHELBY, N. C.—Measuring 50 by 100 feet, the Shelby Cotton Mill has under construction an addition to the cloth room and warehouse. The addition will consist of a two-story brick building, of modern mill construction. It is to be added to the main building, where a railroad siding is available. The addition will have a full basement. The construction work is in charge of the Fiske-Carter Construction Company of Greenville, S. C.

R. T. LeGrand, secretary and treasurer, has announced that no additional machinery will be installed. He states that the addition was planned in order to increase the warehouse facilities and make more room in the cloth room. The contract price was not announced.

The Shelby Cotton Mill is one of the largest textile plants in this section. Using 20,332 spindles and a battery of 571 looms, the mill is engaged in the manufacture of sateens and dobby fancies.

AUGUSTA, GA.—At the Enterprise unit of the Sibley-Enterprise Manufacturing Company, long draft roving and spinning equipment have been installed. These mills formerly known as the Enterprise Manufacturing Company and the Sibley Manufacturing Company, two of the oldest and largest cotton mills in Augusta, recently merged into the Sibley-Enterprise Company. Lanier Branson is president of both. The Enterprise Manufacturing Company has been engaged in the manufacture of colored goods, using 37,920 spindles and a battery of 908 looms. The Sibley Manufacturing Company manufactures scrim, drills, tickings and denims, using 38,686 spindles and a battery of 1,008 looms.

MOORESVILLE, N. C.—The Mooresville Cotton Mills are revamping the opening and picking in Mill No. 3. They are changing to the Saco-Lowell blending reserve system.

SHELBY, N. C.—Fourteen thousand throwing spindles will be added to the present equipment of the Cleveland Cloth Mill, manufacturers of rayon and novelty silk dress goods. The company now maintains 10,000 spindles and 486 looms.

The company has had under construction a two-story addition, which will provide for much needed additional space for the mill, in which these spindles will be installed. The addition provides 14,000 square feet of additional floor space.

HIGH POINT, N. C.—A survey here reveals that at the Melrose Hosiery Mills, in the new full-fashioned department, where operations were begun with four of the new machines in place recently, about November 1st the entire new machinery set-up of this new department is scheduled to be in operations.

Charles L. Amos is president and treasurer of these mills. He states that the new machines were purchased at a cost of between \$11,000 and \$11,500 each. One dozen machines are being installed now. However, Mr. Amos states that a much more extensive expansion is planned in the near future. The new building is of sufficient size to accommodate twenty-six machines and auxiliary equipment.

The machines in this new department are Readings. One machine is being installed about every two weeks, it is stated by officials. When all of the new machines are in operation, approximately eighty operatives will be added to the pay roll.

Mr. Amos states that the seamless department of the mills will continue to operate as in the past with no changes in this department.

DENTON, N. C.—T. E. Jennings and W. C. Elder, co-trustees for the Rogers Hosiery Mills, Inc., bankrupt, announces that under and by virtue of an order of sale for the assets of the mills, made by W. T. Shuford, referee in bankruptcy in the Federal District Court for the middle district of North Carolina on Wednesday, September 21, at 10:30 o'clock in the morning, the property will be offered for sale on the premises of the mill.

The property offered for sale will include the real estate, mill building, 600 pounds of yarn, office equipment and fixtures, motor truck, machinery and equipment of mill, including 84 knitting machines, 19 loopers and five sewing machines. These assets will be sold separately and as a whole for the highest bid, and all sold free and clear of all encumbrances, and subject to confirmation by the court.

Howard Bros. Plant Damaged By Storm

The storm which hit New England on September 21st blew off the rear half of the building of Howard Bros. Manufacturing Company at Worchester, Mass., and severely damaged the top floor. As the fire department promptly furnished a large supply of rubber blankets, very little damage was done either to machines or stock, and many of the machines were in operation the next day.

No one was seriously hurt, though Walter Burhoe of the office force, who was doing volunteer work on the top floor because of one or two leaks that had started, received some severe cuts and bruises on the head when the roof started to go. Two others were badly bruised.

Building repairs were started the next day, and rapidly pushed to completion.

Celanese Corp. Sells \$10,000,000 in Debentures

New York.—Celanese Corporation of America has sold privately \$10,000,000 of 10-year 4¼ per cent sinking fund debentures, it was announced recently.

It was also announced the company has increased its bank loans to \$5,000,000 from 4,500,000 and placed them on the basis of serial maturities.

Proceeds of the financing are to be used it was said, "in further developments and changes designed to obtain economics in operations."

Rayon Yarn Deliveries in August Exceed High Point of July

A new all-time high rate of rayon yarn deliveries by American producers was recorded in August, exceeding even the recent high point of July, according to the *Rayon Organon*, published by the Textile Economics Bureau. The daily rate of August deliveries is measured by the Organon index of 895 which compares with 841 for July and a 1938 low point of 372 in January.

Producers' yarn stocks showed a corresponding drop from a 3.1 months' supply at the end of July to a 2.3 months' supply on August 31st. The 1938 peak of this stock index was a 3.9 months' supply as held at the end of June.

It is pointed out that these high deliveries were caused both by the normal seasonal rise in rayon consumption by weavers and knitters at this time of year and by the efforts of rayon fabricators and distributors to build up their cloth inventories to more normal levels.

The *Organon's* index of rayon yarn deliveries (1923-1925 = 100) is as follows:

	Aug.	July	June	May	April	Mar.	Feb.	Jan.	Yearly Average
1938.....	895	841	473	445	445	455	477	372	550*
1937.....	693	697	693	724	702	693	721	737	590
1936.....	826	769	664	572	572	554	648	609	669
1935.....	712	589	532	502	351	334	520	675	571

*Year to date.

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THE KEEVER STARCH CO.

COLUMBUS, OHIO

Mill News

STATESVILLE, N. C.—The Empire Knitting Company of Philadelphia, Pa., manufacturers of cotton, wool and rayon sweaters and bathing suits, have established a plant at Statesville, and are now employing about 70 people. They purchased a building. David Karr is local manager.

ROME, GA.—Designed to practically double the former floor space at the Dellinger Bedspread Company, an addition has been constructed. This company is engaged in the manufacture of a new line of Chenille and hand-tufted bedspreads. In addition, new machines have been installed. One of the outstanding products of the Dellinger Bedspread Company is the combination Chenille and punch work spreads.

McCOMB, MISS.—The McComb Cotton Mills began operations a few days ago. It was stated that approximately 300 operatives will be put on the pay roll of about \$4,500 weekly. The mills were closed March 3rd. The plant manufactures sheetings and drills.

ABERDEEN, N. C.—The brick work on the brick and concrete building which will house a branch factory of the Crystal Hosiery Mills of Philadelphia, will be completed within the next ten days, and it is hoped the building will be ready for occupancy by November 1st.

The new building 100 by 112 feet, will provide room for 20 full-fashioned hosiery machines, and it is estimated that it will furnish employment for approximately 64 local people.

GALAX, VA.—Twenty new machines have been installed recently at the local Burlington Mills plant for weaving the rayon fabrics.

The mill now has about four times the number of machines in operation it had a year ago when the mill was opened.

HIGH POINT, N. C.—R. T. Amos, president of Amos Hosiery Mills here, and associates have begun the erection in Pilot Mountain, N. C., of a \$50,000 full-fashioned hosiery mill to be known as the Amos & Smith Hosiery Company, according to Mr. Amos.

A contract has just been awarded for erection of the plant, which will be a one-story brick structure and contain a knitting room 115 by 116 and a finishing room 96 by 105.

The building is expected to be completed within 90 days, and plant operations will begin the first of the year, Mr. Amos said. Twenty-one new 24-section, 45-gauge full-fashioned knitting machines will be installed in the plant.

Operations will start with about 100 employees, and eventually, the company plans to employ 200. Associated with Mr. Amos will be Herman H. Smith, who is assistant manager of the Amos Hosiery Mills here.

GASTONIA, N. C.—The 10th and last machine for the Gastonia Full-Fashioned Hosiery Company has arrived at the plant. The firm was organized early this summer.

BRISTOL, VA.—The Boyerstown Knitting Company, which has been operated here as a branch of a Philadelphia company of the same name, has sold all of its machinery to the Cranberry Knitting Company, Cranberry, N. C., and will go out of business.

CLINTON, S. C.—The Adair Hosiery Mills of this city have closed, and the machinery is now being sold. They had 75 circular knitting machines and manufactured men's half-hose and misses' anklets.

BRISTOL, VA.—The American Thread Company is now operating the yarn finishing mill at this city, formerly owned by the Mutual Thread Company. C. W. Jackson is superintendent.

BEDFORD, VA.—The Belding Hemingway Company of Connecticut, one of the oldest manufacturing concerns of the North, has filed notice with the Virginia Corporation Commission that it will take over and operate in its own name the plant of the Bedford Weaving Corporation, whose stock it purchased more than a year ago.

The Bedford plant, located in the old Armstrong Building, manufactures rayon cloth and employs more than 200 persons in three shifts. It originally was organized by New York and Pennsylvania capital.

MORGANTON, N. C.—The Ross Fabrics, Inc., a newly organized concern, is scheduled to be manufacturing upholstery fabrics and draperies by September 15.

With the installation of 50 Jacquard weaving looms on the first floor of the handsome gray stone building on Meeting Street, constructed for lease to the new corporation by Dr. E. W. Phifer, this outlook for an early production has come. The installation of the new machinery is in charge of the Wright Machine & Foundry Company of Valdese, N. C., and will be pushed to completion. Leading officials of the company believe that the weaving of samples may get under way as soon after the middle of September as possible, and certainly by October 1st.

Charles H. Ross, who returns to Morganton, his native city, as secretary and general manager of the new concern after extensive experience in the textile business elsewhere, is on the scene as the company speeds toward actual manufacturing operations.

While the weaving operation will begin in September, the beginning of operations will be on a small scale for the production of samples for the trade and increasing gradually. Local labor will be employed as far as possible, according to the announced policy of the officials.

Mills Accept Cotton Bagging

(Continued from Page 19)

lic Cotton Mills, Great Falls, S. C.; Revolution Cotton Mills, Greensboro, N. C.; Riverside & Dan River Cotton Mills, Danville, Va.; Samoset Cotton Mills, Talladega, Ala.; Saxon Mills, Spartanburg, S. C.; Superior Yarn Mills, Statesville, N. C.; Textiles, Inc., Gastonia, N. C.; Travora Mfg. Co., Graham, N. C.; Trenton Cotton Mills, Gastonia, N. C.; Union-Buffalo Mills, Greenville, S. C.; Union Mfg. Co., Union Point, Ga.; Victor-Monaghan Co., Greenville, S. C.; Virginia Mills, Swepsonville, N. C.; Wallace Mfg. Co., Jonesville, S. C.; Wamsutta Mills, New Bedford, Mass.; Waverly Mills, Laurinburg, N. C.; Wennonah Cotton Mills, Lexington, N. C.; West Point Mfg. Co., West Point, Ga.; Paul Whitin Mfg. Co., Northbridge, Mass.; Whittenton Mfg. Co., Boston, Mass.; Woodside Cotton Mills Co., Greenville, S. C.; York Mfg. Co., Saco, Me.

Many additional mills when they become familiar with the plan will also wish to co-operate with the industry and the growers of cotton in this increase in the use of cotton.

World Use of U. S. Cotton Off 18% in Year, Census Shows

London.—World consumption of American cotton declined nearly 18 per cent in the year ended July 31, as compared with the preceding year, according to preliminary results of a census taken by the International Cotton Federation, Manchester.

Consumption of all types declined 12 per cent and total mill stocks were off 10½ per cent, yet the world's spinning spindleage, compared with January, is only fractionally lower.

The world's total cotton consumption for the year is set at 26,168,000 bales, compared with 29,720,000 bales in the preceding year.

In the half year ended in July, the United States consumed 2,669,000 bales against 4,091,000 for the same half year in 1937. Great Britain took 1,071,000 bales for the period against 1,445,000 the year before; Germany (now including Austria) took 622,000 bales against 541,000; France 568,000 bales against 602,000; Russia (estimated), 1,400,000 against 1,060,000; Italy, 320,000 against 329,000; India, 1,767,000 compared with 1,540,000; Japan, 1,563,000 bales against 2,061,000; and China (estimated), 655,000 bales compared with 1,262,000 in the same half of 1937.

World spindleage is placed at 147,136,000 as of July 31, a slight decline compared with 147,219,000 in January. Spindleage allotments follow:

United States, 23,376,000 vs. 26,611,000; Great Britain, 36,879,000 vs. 37,340,000; Germany, 11,074,000 vs. 10,323,000; France 9,794,000 vs. 9,783,000; Italy, 5,350,000 vs. 5,395,000; India, 9,731,000 vs. 9,763,000; Japan, 12,550,000 vs. 12,297,000; China 4,300,000 vs. 4,000,000; Russia (given same), 10,050,000 vs. 10,050,000.

G. E. Declares Dividend

The board of directors of the General Electric Company, at its meeting in New York, September 9th, declared a dividend of 20 cents a share for the third quarter, payable October 25 to stockholders of record on September 23.



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- 2—33" S. Morgan Smith Single Cylinder Gate Horizontal Type Turbine, 350 H.P. at 28' head 240 rpm. with 2—G. E. 312 KVA 2200 Volt, 3 ph, 60 cye, 600 rpm, type ATB, form B AC Generator.
- 1—S. Morgan Smith 36" Single Cylinder Gate Horizontal Type Turbine, 425 H. P. at 28' head 220 rpm. with G. E. 375 KVA, 2200 V 3 ph. 60 cye, 600 rpm. type ATB, form B AC Generator.

Southern Electric Service Co.
Charlotte, North Carolina

Spinning Room Potpourri

(Continued from Page 10)

if not longer than the other, since there was less flexing at the lap.

There is a tape on the market that can be sewed without leaving a lap. It is woven double, and at the joint of lapping, the two parts split, and the bottom portion of one end and the top portion of the other is cut off. Then when these ends are joined and sewed together, a continuous tape, with no lap, is the result. Since the chief trouble with spinning tapes is wearing out at the lap, it is likely that this new method of joining the tape will replace, to a large extent, all other methods, providing that it can be made in the lighter weights.

Another method of sewing tape without a lap is the one referred to as being folded at a 90 degree angle, then butted together and sewed. The disadvantage to this method of sewing is that it leaves a tail on the outside of the tape that may fray and that causes much agitation of the air at the level of the spindle, plus the fact that it is troublesome to the spindle plumber. Another fault of this method is that it is not possible to reverse sides of the tape when one side becomes slick from oil or wear. However, as against the conventional method of



lapping the tape, the writer is of the opinion that this method is better.

Regardless of the method used, or type of tape used, spinning tapes should give better results than bands. The contact with the spindle is many times that of the band drive, and the action of the idler pulley tends to equalize any discrepancies in tension, providing reasonable care is taken in application. Perhaps it is well to note at this point that the proper care of idler pulleys and bearings, as well as the angle at which they are set, is important. The writer has seen cases where the mill bought idler pulley bearings from a local woodworking shop, and attempted to impregnate the bearings with oil at the plant. This method is questionable, and is likely to result in excessive costs in the long run. Proper bearings are essential

to the successful operation of idler pulleys, and it is a safer bet to buy them from the spinning frame manufacturer or someone he recommends.

Getting back to the checking of speeds, it is frequently the case that when a yarn number is changed the person in charge of the change, whether the section man or the second hand, fails to check on the size of the pulley after the change is made. If the proposed speed for the number changed to requires a 16-inch pulley, it is often the case that the changer uses a 14-inch pulley, or an 18-inch, depending on which one is the easiest to find, thus ending up with a front roller speed which is not in agreement with the other frames in the room on the same number and twist. This is likely to happen in any but the best run spinning rooms, and is certain to cause a variation in the yarn. However, the likelihood of this occurrence is not nearly so great in a mill where the numbers run fairly constant as in a mill on a large variety of goods.

Proper speeds are very important in an efficiently operated plant where doffing time is considered in the assignment of doffers. If the doffers are assigned to a certain number of frames, based on the doffing time of each frame, it is most important that these frames doff on time. Otherwise there may be several frames stopped for doffing at the same time, resulting in lost production and lost time for the spinner and doffer.

Another point on the checking of speeds is in arriving at the proper speed (r.p.m. front roller) for each count and twist of yarn. After the speeds have been checked and made uniform on all like counts and twists, it may be possible to obtain better yarn by experimenting with the speeds. Assuming that the 20s/1 filling, 18 turns, is running with a front roll speed of 90 r.p.m., test yarn for breaking strength and uniformity. Then run the speed up to 100 on one doff of one frame and check this yarn. If it gives as good breaking strength, and the appearance of the yarn is as good, it may be possible to step up all the frames on this count. This would be equally true of all other counts. Maybe the speed is too high, and a check should be made with a lower front roll speed.

It is impossible to say that all 20s/1 filling, or any other count, should be run at a certain speed in all cases. Variation in cotton grade, staple, character, etc., as well as humidity, twist, drafting equipment, and numbers of other things, will result in a difference in the yarn, whether the speed is the same or not. It is a good idea to have a speed designated from which to start, and then experiment until the best speed is found, from the standpoint of both quality yarn and quantity production. These two factors must constantly be weighed against each other to get maximum efficiency. Generally speaking, if highest quality is desired, a lower front roll speed is indicated, the overseer's problem being to maintain the highest speed that will produce the quality of product that is required by his mill.

The third of this series of articles will appear in an early issue.—Ed.

Andrews Names Textile Wages and Hours Body

Elmer F. Andrews, administrator of the wage and hour division of the Labor Department, has announced the appointment of Industry Committee No. 1. It covers branches of the textile industry employing more than 1,300,000 wage earners. The committee is appointed to recommend a minimum wage schedule not less than 25 cents an hour nor more than 40 cents an hour which will not substantially curtail employment.

The committee consists of:

Public Members

Donald Nelson, chairman of the committee, vice-president of Sears Roebuck & Co., Chicago.

Grace Abbott, former chief, Children's Bureau, U. S. Department of Labor, now School of Social Work, University of Chicago, Grand Island, Neb.

P. O. Davis, extension director of Alabama Polytechnic Institute, Auburn, Ala.

E. L. Foshee, oil operator, Sherman, Texas.

Louis Kirstein, vice-president, Wm. Filene's Sons Co., Boston.

George Fort Milton, publisher, *Chattanooga News*, Chattanooga, Tenn.

George W. Taylor, economist, University of Pennsylvania, Philadelphia, Pa.

Employee Members

Paul Christopher, Textile Workers Organizing Committee, Charlotte, N. C.

Francis P. Fenton, American Federation of Labor, Boston.

Sidney Hillman, chairman, Textile Workers Organizing Committee, New York City.

R. R. Lawrence, textile Workers Organizing Committee, Atlanta, Ga.

Elizabeth Nord, Textile Workers Organizing Committee, Manchester, Conn.

Emil Rieve, Textile Workers Organizing Committee, Philadelphia.

H. A. Schrader, International Association of Machinists, Washington, D. C.

Employer Members

G. Edward Buxton, Androscoggin Mills, Providence, R. I.

Charles A. Cannon, Cannon Mills, Kannapolis, N. C.

Robert Chapman, Inman Mills, Spartanburg, S. C.

John R. Cheatham, Georgia-Kincaid Mills, Griffin, Ga.

John Nickerson, Cheney Bros. Co., New York City.

Seabury Stanton, Hathway Mfg. Co., New Bedford, Mass.

R. R. West, Riverside and Dan River Cotton Mills, Danville, Va.

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Greenville, S. C.
Harold P. Goller

Edgewood, R. I.
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WANT JOB as cotton or rayon card grinder or section man. Do what is needed. Not less than 45c hour. Can clothe cards. Loyal. Come on trial. Address "Loyal," care Textile Bulletin.

August Cotton Spinnings 76.2% On 80-Hour Week

Washington.—The Census Bureau reported the cotton spinning industry operated during August at 76.2 per cent of capacity, on an 80-hour week basis, compared with 70.2 per cent during July this year, and 85.2 per cent during August last year.

The bureau explained that enactment of the new wage-hour act, providing for a maximum of 80 hours for a 2-shift week during the next two years, caused a change in the method of calculating the monthly percentage of activity. Previously, this was computed on a basis of the weighted average hours of operation for the day shift for all of the mills.

Spinning spindles in place August 31 totaled 26,312,625, of which 22,152,526 were active at some time during the month, compared with 26,376,210 and 21,916,166 for July this year, and 26,923,712 and 24,353,102 for August last year.

Active spindle hours for August totaled 7,374,791,306, or an average of 280 hours per spindle in place, compared with 5,919,306,582 and 224 for July this year, and 8,184,561,738 and 304 for August last year.

Spinning spindles in place August 31 in cotton-growing States totaled 18,778,166, of which 16,783,514 were active, compared with 18,798,244 and 16,660,094 for July this year, and 18,831,686 and 17,775,110 for August last year, and in New England States 6,733,456 and 4,755,728, compared with 6,777,446 and 4,684,796 for July this year, and 7,173,030 and 5,855,108 for August last year.

Active spindle hours for August in cotton-growing States totaled 5,789,659,507, or an average of 308 hours per spindle in place, compared with 4,700,371,514 and 250 for July this year, and 6,385,888,033 and 339 for August last year, and in New England States, 1,445,904,718 and 215, compared with 1,109,858,626 and 164, and 1,645,456,914 and 229.

Active spindle hours and the average per spindle in place for August by States, follows:

Alabama 486,186,655 and 258; Georgia 970,676,641 and 299; Mississippi 56,344,964 and 270; North Carolina 1,686,735,919 and 280; South Carolina 2,032,609,348 and 354; Tennessee 213,655,928 and 356; Texas 87,801,080 and 347; Virginia 208,235,184 and 328.

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Taxes Average

\$514 Per Worker

America's largest corporations paid taxes to the Federal government amounting to an average of \$514 for each employee or \$291 for each holder of common stock in 1937, a recent study reveals.

These corporations, with \$42,000,000,000 of assets, employing over three million persons and with five and a half million common stockholders, paid the latter group \$1.19 a share on the average while the government collected at the rate of \$2.62 in taxes per share of common stock.

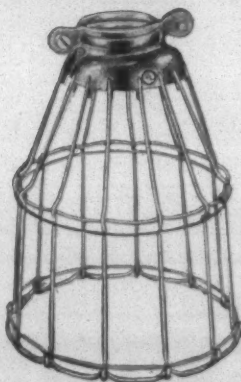
The total tax bill of these companies during 1937 was \$1,631,284,094, or \$373,000,000 more than in 1936, and \$950,000,000 more than in 1932.

"The capital of these 150 companies is furnished not by a few wealthy citizens, as many suppose," a statement said, "but by 6,490,000 holders of preferred and common stock, the vast majority of whom are small investors."

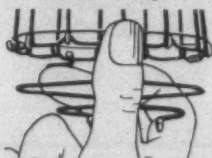
"More than three-fourths of the shareholders have less than 100 shares in which they have invested their savings."

"The prosperity of a nation depends upon the purchasing power of its people. Excessive taxation seriously reduces the purchasing power of millions of thrifty citizens, investors and workers who pay the bulk of the taxes."

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No. 1429 (without trap) is made for brass sockets, No. 1432 (without trap) for weatherproof sockets. Both are for 25 to 60 watt lamps. Same, with trap, are No. 1429-T and No. 1432-T. Trap alone is No. 2932. Order from your wholesaler.

Left: To remove or replace trap at base, simply press inward on the guard rim where the trap hooks onto it, and snap the trap on or off as desired.

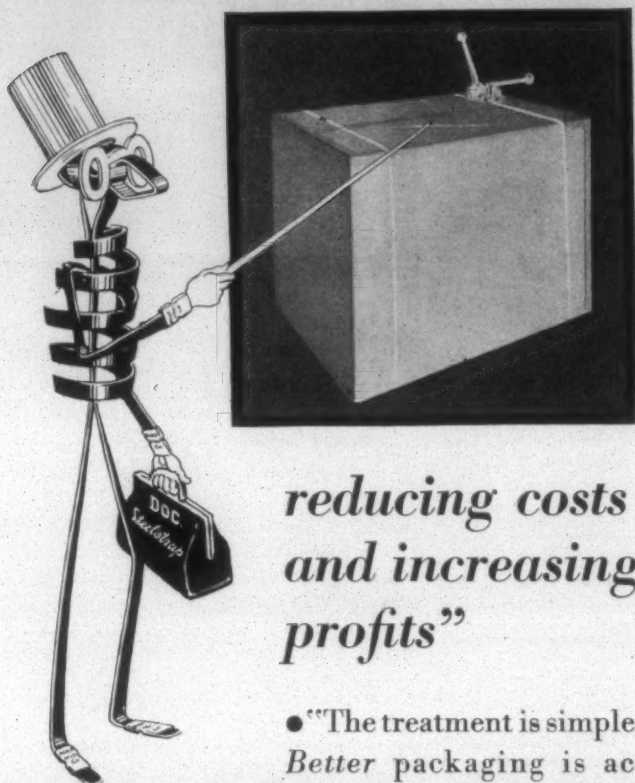
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MASTER MECHANICS' SECTION

Pointers On The Proper Selection of Coal For Existing Stoker Equipment

By Morgan B. Smith

Dean, Lawrence Inst. of Technology
Detroit, Michigan

COAL selection for existing steam plant equipment is probably the most important single factor in efficient economical operation of stoker-fired boilers.

The solution of this problem is too often left to the judgment of those unqualified to pass judgment of any value.

The more progressive and far-seeking coal buyers are taking advantage of information possessed by their own engineers, by the stoker manufacturers and by the coal producers and vendors, to aid in the selection of proper coals.

Such co-operation should result in the finding of two or more coals of similar or like burning characteristics for use in the plant in question. These coals should be located in two or more fields. With two or more coals available at all times plant operation is assured continuity against labor or transportation difficulties and "acts of God" which may interrupt coal production in one field but are not likely to do so in two or more fields at the same time. Such an effort can result in better practice in steam boiler operation and also in lessening so-called stoker failures which are so often due solely to improper coal selection. With this form of co-operation it should be far easier for stoker manufacturers to formulate their recommendations for type and size of stokers for a given plant because they should have clearly in mind coals which possess the required characteristics and a good knowledge concerning coal producers and vendors with respect to past records of performance in the mining, preparation and shipping of their respective coals. The question, if any, of reliability of coal producers and vendors should also be considered by the buyer.

Principal Factors To Be Considered

Before going into the characteristics of available coals we will enumerate briefly the more important factors which must be taken into account in coal selection. These are:

1. The type and operating characteristics of the installed stokers.

2. The furnace characteristics; length, width and height; is this furnace volume a comparatively flat and low rectangular volume or, is it figuratively stood on end affording more effective furnace volume? Is there an ignition arch? Are water tubes present in the furnace producing large "black areas" effecting rapid heat absorption from the fuel bed and possibly leading to loss of fuel ignition?



3. The boiler "setting." Is the boiler properly set (high above the stoker) or is it "set" low?

4. Boiler ratings in operation, minimum, maximum and average, with the time of each operating condition per 24 hours.

5. The load characteristics; steady or peaked at regular periods; unsteady with unpredictable peaks; sudden falling off of the load.

6. The rate at which fuel must be burned to meet the load characteristics; particularly peak loads; banking periods, if any.

7. Furnace refractories. Will they stand up under the

temperatures and slagging tendencies attendant upon peak load operation?

8. Fuel bed characteristics for the installed stokers. Is the operating fuel bed flat or inclined? Is there a marked tendency for the fuel to act as a CO gas-producer? If so, what means are afforded to complete the combustion of CO gas? Is agitation of the fuel bed moderate or pronounced? Does the stoker in question operate in such a manner as to promote the formation of holes in the fuel bed.

9. Time of coal travel from feed to dump grates. Is sufficient time afforded in the stoker operation to offset the ash pit losses usually suffered during peak load operation? Does the fuel travel uniformly over the grate or tuyere surfaces? Can the fuel bed be maintained with reasonably uniform thickness under all conditions of operation?

10. The air supplied for fuel combustion. Is the air properly distributed? Under what pressure at the front, middle and rear sections of the fuel bed? Is over-fire air provided other than that which leaks into the furnace at the front, rear and along the sides of the stoker or as excess under-fire air? Is this air preheated?

11. The travel of combustion gases. The cross-sectional area of all gas passages, both in the furnace and through the boiler passes. Does this area correspond with the volume of gases attendant upon peak load operation?



Is sufficient gas velocity afforded to provide rapid and efficient heat absorption by the boiler surfaces? Is sufficient turbulence set up in the furnace and gas passages?

12. Boiler baffling. Is the first pass through the boiler virtually a continuation of the furnace, or, does it present markedly restricted area for gas travel? Are there likely to be dead velocity spots in the gas travel through the boiler?

13. The known ability of the installed stokers when properly operated to handle efficiently certain types of coal.

14. Operating instruments. Is the boiler room provided with the necessary instruments devised for the guidance of plant operators? Or, are such instruments absent, leaving the operators under the necessity of "blind" operation?

15. Personnel. What type of operators are employed? Can intelligent operation be expected in daily operation? Can the operators be taught how to operate efficiently under the given load characteristics? What is the attitude of management?

16. Tests of various coals with the installed stokers. The "economic value" of coals can be determined in dollars. This value, when added to the purchase price, gives a total cost for each coal burned in a given plant; this may be termed the "compensated cost price" for each coal. With this compensated cost price for each coal at hand, the purchasing agent has a practical yardstick with which he can compare the economic values of two or more coals which have been tested in his plant. The element of guessing can be minimized through such procedure.

Types of Stokers

1. Hand operated or semi-automatic stokers.
2. Over-feed inclined grate or V-type stokers.
3. Natural draft chain or traveling grate stokers.
4. Forced draft chain or traveling grate stokers.
5. "Industrial" under-feed, single, double (or more) retort stokers.
6. Multiple retort under-feed stokers.
7. Stokers which combine over-feed with suspension of the finer fuel particles above the grates.

Types of Fuels Best Adapted To Stoker Firing

1. Hand operated or semi-automatic stokers. Suitable only for small plants and must be provided with low ash coals in nut and larger sizes.

2. Over-feed inclined grate or V-type stokers. In general low ash, high grade coals should be used; the semi-bituminous coals have been widely used in the past.

In general coals like Pittsburgh No. 8 and Ohio No. 6 have not proved satisfactory.

The low ash West Virginia and eastern Kentucky coals seem to have given the best results.

3. Natural draft chain or traveling grate stokers. Operate best with free-burning, non-coking coals, like those of Illinois. Heavy coking coals seem to be unsatisfactory. Handle lignite coal fairly well.

4. Forced draft chain or traveling grate stokers. Anthracite fines, coke breeze, or mixtures of anthracite (or coke) with bituminous coal can be handled satisfactorily.

5. "Industrial" under-feed stokers. Side-cleaning type. Operate well on coals of widely varying characteristics; the range of suitable coals runs all the way from the eastern grade semi-bituminous coals to the comparatively low grade coals of Illinois, etc.

All coals should be crushed to "slack" sizing if received in forms other than slack.

6. Multiple retort under-feed stokers. Heavy-duty, rear-cleaning. Probably the nearest approach to the universal fuel stoker.

All we have said above concerning under-feed stokers can be applied to the multiple-retort stoker.

The high-grade, low ash coals in West Virginia and eastern Kentucky seem to give the best results. However, coals of widely varying types are being successfully burned.

7. Stokers which combine over-feed of fuel with suspension of the finer fuel particles above the grates. Stokers of this type are burning successfully: machine cuttings, track cleanings (both low and high grade coals); lignites particularly well; coke breeze; eastern coals with high heat value, low ash and low ash-fusion temperatures; semi-anthracite; sub-bituminous coals.

They are handling the less expensive forms of coal successfully, such as 1¼-inch, ¾-inch screenings or slack.

In some instances local coals, which could not be burned with previously installed stokers, are being handled satisfactorily, with marked saving in freight charges.

Characteristics of Coals

Under this heading we will attempt to point out the chief characteristics whereby coals may be distinguished from each other; where they may be obtained; how they rank in the progressive change from lignites to anthracites, as indicated by their "fuel ratios" (fixed carbon divided by volatile); and, lastly, qualifications of coals for use with stokers.

Ranking of Coals:

Anthracite coals. Fuel ratio runs from 100 to 12. (50-60 common).

Semi-anthracite coals. Fuel ratio runs from 12 to 8 (10-6 common).

Semi-bituminous coals. Fuel ratio runs from 8 to 5 (7-3 common).

Bituminous coals. Fuel ratio runs from 5 to 0 (3 common).

There is considerable over-lapping in fuel ratios of eastern coals and such a ranking does not apply in general to western coals.

Sources of Coals:

Anthracite coal. Pennsylvania, Colorado, New Mexico, Utah and Washington.

Semi-anthracite coal. Pennsylvania, Arkansas, Colorado, Utah, New Mexico, Virginia and Washington.

Semi-bituminous coal. Pennsylvania, Arkansas, Mary-

land, Utah, New Mexico, Oklahoma, Virginia, Washington and West Virginia.

Bituminous coal. Pennsylvania, Virginia, West Virginia, Kentucky, Ohio, Alabama, Indiana, Illinois, Maryland, Michigan, Tennessee, Iowa, Oklahoma, Utah, Washington, Wyoming, Missouri, Montana, New Mexico, Kansas, Arkansas and Colorado.

Characteristics of Coals:

Anthracite coal is a hard coal, distinguished by high fixed carbon and low volatile content.

Semi-anthracite coal is not as hard as anthracite and its fuel ratio is lower.

Semi-bituminous coal is really misnamed. Possibly super-bituminous would be a better name. Fixed carbon is higher and volatile content is lower than in bituminous coals.

Bituminous coals. Distinguished as a rule by a maximum fuel ratio of 3, the general tendency being toward equal contents of fixed carbon and volatile matter. Possibly the resistance to weathering offers the best measure of the difference between bituminous coals and those of lower rank, bituminous coals being highly resistant. The coking or non-coking properties are not well enough defined to be used as a distinguishing feature; in fact, some of the best coking coals fall into the semi-bituminous rank without question. The lower limit is equally uncertain.

Sub-bituminous coals, or "black lignites," are mined in Colorado, Montana, New Mexico, Texas, Utah, Washington and Wyoming.

They are not true lignites, as their structure is not woody.

Qualifications of Coal for Steam Generation With Stokers

Approximate relative values of coals for steam generation, as given by J. F. Cosgrove, are as follows:

Semi-bituminous	100
Semi-anthracite	93
Anthracite	91
Bituminous (Eastern)	89
Bituminous (Western)	67
Lignite	45

Due to shortage of space, it is not possible to carry all of this article in one issue. It will be continued in the issue of November 1st, with information as to the proper methods of selecting the coals, their characteristics by regions, types of coals, etc.—Ed.



Open Forum For Master Mechanics

With the thought that the master mechanic has not been getting his share of space in trade publications, it will be the policy of TEXTILE BULLETIN to devote several pages of each issue of the first of the month exclusively to the service of master mechanics. The Open Forum will be for the publication of discussions of problems submitted by master mechanics; and peculiar to their department. Also, other items of particular interest to them will be included in these pages.

Since this is the first publication of this Open Forum, we are presenting only three questions for discussion, which were submitted at our request.

Job Cost System for Master Mechanic

Editor:

I think the idea of a page or two just for master mechanics is a good one, and I do have something that I'd like to get some information on.

I'd like for someone who has to do it, to give me some dope on finding how much of the shop cost should go to each department. The manager tells me that it is being split up by guess work now, and that he wants to find out just how much should be going to each department.

If there is some system without a lot of red tape, and so I wouldn't have to put on a man just to do that, I'd like to know about it. If you get anything on this, will you please let me know just as soon as possible.

Contributor No. 1.

Choker On Squirrel Cage Motor

Editor:

I would like to get some information on the meaning of a "Choker" on squirrel cage motors. I happened to hear this in a conversation that I could not get into, and have been wondering about it since. I am not particularly interested in it from the standpoint of my mill, but would like to know for my own information.

Contributor No. 4.

Repairing of Broken Parts

Editor:

As per your request, I would like to see some discussion as to who is the proper person to pass on the advisability of repairing broken or worn parts. Should the overseer simply send a part down to the shop to be repaired and depend on the shop crew to do it, or should he consult with the master mechanic before the work is done. Nat-

urally, I realize that much of the work that comes to the shop can be handled in this way, but there are cases when it might be cheaper to replace the part than to repair it. Who would have the final say on this?

Also, should all jobs be taken in the order that they are brought to the shop? We know that most repair jobs sent in by the overseer are rush jobs, according to them. I'd like to hear from some master mechanics on how they handle this problem.

Contributor No. 3.

Care of Air Circuit Breakers

Circuit breakers do not require a great deal of care, but the fact that they do not give much trouble is responsible for lack of care in many cases.

It has been found that if a circuit breaker is allowed to remain closed over a long period of time, the contact surfaces will become oxidized. These oxidized surfaces increase greatly the resistance of the contacts, and heating results. To overcome this trouble, and to maintain a constant check on the operation of the circuit breaker, someone should be designated to open and close each circuit breaker vigorously several times about once a week. This does not entail a great deal of work, and will insure that the breaker is in good working order all the time.

All bearings should be lubricated at intervals.

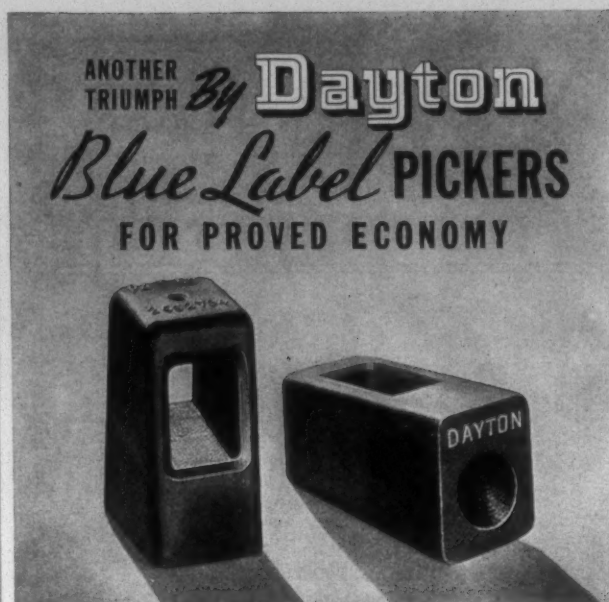
As a check to determine if adjustment is necessary, an impression should be taken on a piece of paper, by closing the brush with the paper between the brush and the contact block. The paper should first be treated with vaseline or some similar grease, lightly. If brushes are found to make only partial contact, it may be possible to remedy this by increasing the tension of the brush. However, if this fails to remedy the situation, no attempt should be made to use emery paper or a file on either the brush or block to improve the contact.

Safety Instructions for Machinist

1. *Work of Machinist:* He operates lathes—machine up gears, bearings and studs, turn down shafts, bore out pulleys, chase threads; operates gear cutter—cut gears; operates drill press—drill holes; operates milling machine—mill keyways and square up studs; operates emery wheel—grinds tools.
2. *Work at Machinery:* The safe machinist avoids injury on his job by doing the following:
 - (1) He sees that all guards are in place before starting any machine. He reports all things that need repair to his second hand.
 - (2) He wears the proper clothing on his job to

keep him from getting hurt, such as good shoes, close-fitting clothing and goggles whenever needed. See Safety Instructions on Clothing.

- (3) He does not use his hands or body as a brake to stop moving machine part even when the power has been cut off.
- (4) He does not shift moving belts by hand. He is particularly careful when working around belts. To put a Belt on a Pulley: 1st, Stop the Machinery; 2nd, If the belt is large, force it onto the pulley as far as possible by hand and then tie it using string or cord or rope light enough to break if the pulley swings around too far. Turn the pulley over by hand if possible, if not, make sure everyone is clear, then apply power; 3rd, If the belt is small, use a smooth stick or hammer handle to force it into place.
- (5) Use only safe tools in good condition.
- (6) Before starting repairs on any machine, he makes sure that the power is off and that it will remain off and the machine will not start until he has completed the job. He avoids oiling, adjusting or repairing machinery that is in motion.
- (7) He does not use power when changing such machine parts as face plates or chucks on lathes, for he knows it is dangerous.
- (8) In operating Lathe, he makes sure the work is clamped tight in chuck and he does not leave wrench in the chuck.
- (9) In operating Drill Press, he uses drills properly sharpened to cut the right size. He never attempts to hold the work under the drill by hand; he clamps it securely to the table before he starts the machine.
- (10) He runs the drill only at the proper speed; forcing or feeding too fast may result in broken or splintered drills and serious injury.
- (11) If the work should slip from the clamp, he never attempts to stop it with his hands. He stops the machine to make any adjustment or repair.
- (12) He uses a stick or brush to remove chips from the drill—never his fingers, cotton waste or a rag. He files or scrapes all burrs from the drill hole.
- (13) To prevent shavings from getting into the eyes, he does not keep his eyes on a level with the drill while it is in motion. He uses goggles whenever necessary.
- (14) He is extremely careful when reaching around the revolving drill. He does not wear gloves while operating the drill; if handling rough material he uses gloves only when the drill is not running.
- (15) He always stops the drill if he leaves the machine.
- (16) In operating a Gear cutter, he makes sure that the cutter is clear of work before he starts the machine. He does not feel of the cutter to see if it is sharp while the machine is in operation. He does not leave finished work or gear blanks on floor around machine.



The proved product of 8 years' experience in the development of Loom Supplies—Dayton Blue Label Pickers assure you long, trouble-free life, and unequaled economy.

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Dayton Blue Label Pickers are easy to install—they fit the stick and yet have sufficient reserve stretch to accommodate large and off-size sticks.

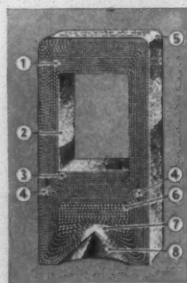
Molded under controlled heat and pressure, they keep their shape and stay "put" on the stick—assure maximum efficiency and reduce shuttle costs.

Dayton Blue Label Pickers fit either side of the loom. Uniform in weight, size and quality, they do not deteriorate in storage and are not attacked by rodents.

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- 4 Wrinkle Eliminator Beads. Prevents loosening of Shuttle Impact Face.
- 5 Edges rounded and molded. Prevents breaking of filling threads.
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- 7 High Compression Section. Further extending life of Picker.
- 8 Molded Shuttle Impact Hole.

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Cotton Goods Markets

New York.—During the past week, demand for cotton gray goods broadened suddenly, as cotton prices went higher. The assumption was that the possibility of a peaceful settlement of the crisis in Europe was the contributing factor, but later developments of the week that looked more like war failed to effect the markets trend.

Mills sales of about 40,000,000 yards of print cloths and related items were more than double weekly production. Prices advanced and the increases paid on substantial amounts of cloth.

Sheetings were also active and prices stronger. Sales of fine combed goods were more than 25,000 pieces. Industrial fabrics were also in better demand and novelty cloths sold in good volume.

Finished goods continued to move freely. Percales were active and mills advanced prices on sheets and pillowcases $2\frac{1}{2}$ cents a yard. Work clothing fabrics started to move in larger volume following heavy sales of overalls. Demand for wool blankets resulted in shortages in some lines. Chenille bedspreads were sold up for weeks ahead and there was a better demand for curtains.

The terrific hurricane in the New England States will undoubtedly result in greatly decreased retail and wholesale sales in that area at present, though the reduced output from that area as a result of the storm may serve somewhat to balance the effect. Deliveries to the area will be delayed as a result of washed out rail and highway lines.

It will be some time before a comprehensive view of the damage done to Eastern mills will be possible, but it is a surety that the damage will run high, from water-soaked machinery and stocks, power failure, etc. According to reports, with the exception of the Providence, R. I., territory, there was a minimum of damage to finishing plants in the New England area, and most of the plants that are not now operating will be able to operate as soon as electric power is available.

Apparently, sales of unfinished cotton cloth were, in aggregate, probably about equal to the increased mill output. Print cloth sales were nearly double production, indicating that in some other lines the mill output continues to be larger than sales. However, in practically all lines the situation is decidedly showing improvement, and indicates that the trend may continue upward for some time.

J. P. STEVENS & CO., Inc.

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40-46 Leonard St., New York

Cotton Yarn Markets

Philadelphia.—In spite of the assumption that in some cases the Wage and Hour Law will increase costs in some yarn mills, there is at present the condition existing that makes it possible for buyers to purchase ordinary yarns at less cost than was current a few weeks ago. As this is written, prices have eased off as much as a half-cent on a good many carded counts and a half to a cent on combed yarns. This is not always the case, since many spinners continue to quote higher, but it is the opinion among most buyers that they can fill their immediate requirements at less cost.

All in all, it seems that for the next few weeks at least, the consumer will be in control of the market, and there is little or no incentive toward buyers stocking up for the future, in spite of the threat of higher operating costs as a result of the application of the Wage and Hour Law. Inquiries have been on the increase, but buyers have been interested in lower prices than most mills have been willing to meet, and actual business has remained at about the same level.

Deliveries have been satisfactory, under the circumstances, but the volume of old-contract business is not equal to the volume noted during the Summer. Apparently the only solution to this problem is sharply increased industrial activity within the next few weeks.

In some cases it has been noted that good customers, who have a reputation of taking large orders on schedule, have been able to get concessions on price from many spinners, who are willing to take a beating in order to keep their mills running and be sure of collections and deliveries at least. Not all of the mills are in this condition, however, and reports are that some mills have refused orders at only slightly less than asking price. These mills are the ones who have had long time tie-ups with reputable customers who can be depended upon to accept and pay for future deliveries.

Much of the yarn that is being offered at a sacrifice is believed to be of such low quality that the more reputable buyers had rather stick to their regular source of supply than take a chance on the questionable yarns. They are aware of the fact that the less efficiently operated mills are the first ones who are willing to accept price reductions, and they also realize that these mills are the ones which produce the lower qualities of yarn. For this reason, the better buyers have not succumbed to these lower offers.

It is still too early to make any more than guesses as to the amount of quality cotton to be available this year, though practically all estimates are that the average quality will be above that of last year, as more communities go into the production of one-variety cotton, though in years of restricted crops the tendency is toward larger yield regardless of quality.

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WHAT'S NEW

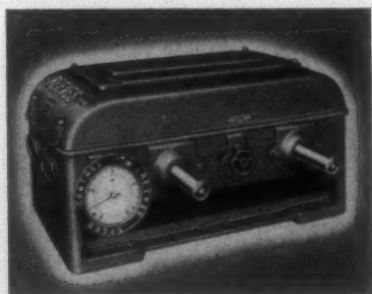
In Textile Mill Equipment and Processes

Reeves "Speedial" Handwheel

Reeves Pulley Co. announces the new Reeves "Speedial" Handwheel, offered as optional equipment, at extra cost, in place of the regular speed control handwheel and the dial type indicator for all sizes of variable speed transmission and vari-speed motor pulley and for the motodrive with ceiling equipment only.

The outstanding advantage claimed for the Speedial handwheel is that it very accurately registers speed settings of these different units.

The actual indication is a definite number of turns (and fractions of turns) of the shifting screw. These are read by the operator as he turns the Speedial. While the standard Speedial is calibrated in turns of the



shifting screw, space is available on the dial for the user to write, in pen or pencil, his own calibrations in whatever corresponding units he prefers.

The Speedial consists of the following parts: a cast hollow handwheel; a metal cup containing an assembly of pinion and gear and a brass counterbalance, fitting into the recessed handwheel; a scale with pointer; and a transparent cellulose lid. Depending upon the class of the transmission, gear ratios of 25:1 and 50:1 are available. The dial is calibrated in accordance with these ratios in from 0 to 25 turns and 0 to 50 turns of the shifting screw. These calibrations appear around the circumference. The smaller scale, printed in red, represents tenths of a turn and a small pointer printed on the transparent cover indicates these turns. Where the nature of the installation requires the additional protection, the Speedial may be sealed watertight.

Parts are readily accessible and may be easily and quickly removed and replaced. Design and construction are simple and there is practically nothing to get out of order. The complete unit is installed or removed just as quickly as the standard handwheel.

New Thermal Plug Fuse

The Trico Fuse Manufacturing Co., Fifth street at Chambers, Milwaukee, Wis., announces its new Trico-Matic thermal time-lag fuse. It is the famous Colortop plug fuse, to which has been added a built-in thermal overload cut-out. This thermal cut-out holds

starting and momentary overloads, yet gives safe and dependable protection on prolonged overloads, making overfusing unnecessary.



Trico-Matics can be used in place of ordinary fuses on circuits having motor driven machinery or appliances, such as refrigerators, oil burners, stokers, washers, mangles, pumps, etc. They will fit the standard Edison base without the use or added expense of special adapters.

On short circuits, the fuse element operates just like an ordinary fuse. Safe protection against lamp cord or other dangerous shorts is assured.

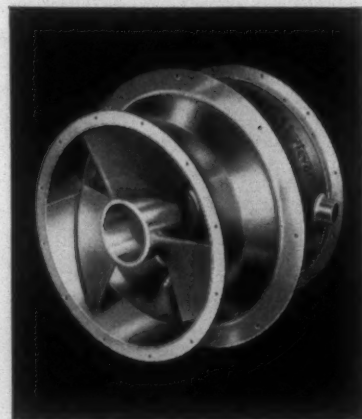
Trico-Matics are said to save 80 per cent in wasted time, fuse burnouts, service calls, and extra wiring costs. Eliminates necessity of using heavier wiring in many instances, installing circuit breakers or separate thermal devices—the use of motors with built-in thermal cutouts, or other complicated troublesome mechanical devices.

Some of the special features of the Trico-Matics are: A color indicator for all popular sizes—all-porcelain shock and vent-proof top—a flag indicator when blown—large ampere rating on window—a flat releasing spring under copper link giving maximum travel in opening arc when blown and an arc-confining disc. Approved by Underwriters' Laboratories, Inc.

New Sturtevant Slasher

Exhaust Units

B. F. Sturtevant Co., Inc., Hyde Park, Boston, Mass., has developed a slasher exhaust unit for textile mill application which has been especially designed to meet vapor exhaust requirements of modern cotton and rayon slashers. Said to be a valuable feature of the new fan is its low power consumption. The fan wheel on the unit is a 3-bladed propeller fan of cast aluminum alloy designed



Slasher Exhaust

for high efficiency and for operation against duct and wind resistance. Standard units are constructed of heavy gauge steel, painted with two coats of aluminum glyptal acid resisting paint, and suitably braced and stiffened with angle irons. An outstanding feature of the slasher exhaust unit is the self-ventilating motor. The motor is supplied with an internal fan wheel which draws cooling room air through a conduit and blows it into the windings and out into the path of the exhaust air. The motor is designed with a special winding particularly suited for operating in the high temperatures encountered in slasher and dryer installations. It is fully enclosed and mounted within an annular band supported in a thimble casing by means of three steel plate arms. In addition to their use in slasher rooms, the units may be applied to dry can ranges, dryers, dyehouses, etc.

New Rockwood Pipe Joint Compound

Rockwood Sprinkler Company, Worcester, Mass., announces the new Rockwood Pipe Joint Compound for sealing pipe joints and gaskets on air, oil, hot and cold water, and steam lines, etc.

According to the manufacturers, this pipe joint compound was the outcome of an effort on the part of the company's chemists to overcome difficulties which had been encountered in the use of pipe joint compounds bought on the open market.

Some of the claims for this new pipe joint compound are: Lubricates threads while pipe joint is being made, make tight metal to metal joint, surface hardens into protective skin, seals without cementing—compound beneath outer skin does not harden, thus permitting joint to be broken easily, more economical to use, ready for instant use without thinning, will not taint or discolor drinking water, etc.

Bulletin On Process Industries Available From Republic Steel

Republic Steel Corporation, Cleveland, Ohio, offers an eight-page folder entitled "Enduro, Stainless and Heat-Resisting Steels and Other Republic Products for the Processing Industries."

To users of stainless steel, this is particularly interesting. The analyses, forms, finishes, suggested applications and recommendations for use of the various types of stainless steel under specific conditions are featured. Illustrations of leading applications, such as still tubes, gas cracking tanks, jacketed kettles, heat exchangers, agitators, funnels and measures are shown.

The folder is authoritative and practical. Copies can be obtained from Republic Steel Corporation, Advertising Division, Cleveland, Ohio. Ask for bulletin Adv. 313.

New Line Of Automatic Batching Scales

The Buffalo Scale Company of Buffalo, N. Y., announces the development of a new line of automatic Batching Scales providing precision control of quality and cost where exact proportioning of materials is a critical operation in processing. The line offers a wide range of flexibility and adaptability for varying production requirements.

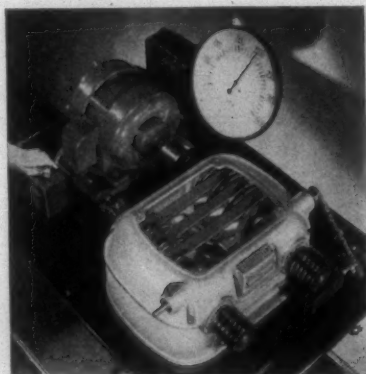
Electric eye and interlocking sequence controls, as well as manual manipulation of the scale beams, are available to fit various conditions, such as continuous production on a constant formula, production where batching formulas are frequently varied, or for installations where relatively few batches are mixed during a day's run.

Equipment is available to handle any reasonable number of ingredients. Accuracy of better than 1/10 of one per cent can be maintained on individual ingredients and on the total batch, according to the manufacturer.

A new bulletin illustrating and describing the wide range of flexibility and adaptability provided by the various types is available by writing the Buffalo Scale Company.

New Vari-Pitch Speed Changer

The Texrope Division, Allis-Chalmers Manufacturing Company, Milwaukee, Wis. has this year put on the market a new Speed Change Unit said to open up new horizons in variable speed transmission. It utilizes the principle of that company's multi-groove vari-pitch sheaves. The new speed changer consists of a rug-



gedly constructed, compact type of unit applicable to all manner of industry, according to the manufacturer. This totally enclosed unit, designed with double shaft extensions and driven from a standard motor, provides the flexibility that makes it adaptable to a variety of layouts to suit the individual application. Where the change in speed is to be adjusted manually only, the unit is provided with a readily accessible hand wheel control. However, the unit can be for electric remote control. Manual remote control is also possible. The present range of capacities now being offered include ratings up to 33 horsepower with ratios as high as 3 3/4 to 1.

Descriptive bulletin 1266 may be obtained from their nearest district office.

B-A "De-Ion" Power Fuse

Dry Boric-Acid power fuse for the protection of high-voltage circuits and equipment, applicable in utility and industrial power plants, and for all high-voltage power use, indoor and outdoor are described in an illustrated booklet published by Westinghouse Electric & Manufacturing Company.

Voltage ratings are from 7500 to 34,500 volts for circuits 440 volts and above and current ratings are from 1/2 to 400 amperes. These B-A "De-ion" line of power fuses provide interrupting capacities up to 1,200,000 kv-a.

Copies of this booklet F.8450 may be secured from the nearest district office of Westinghouse Electric & Manufacturing Company, or from headquarters at East Pittsburgh, Pa.

Booklet on Ball and Roller Bearing Lubrication

The Texas Company, 135 East 42nd St., New York City, has just published an interesting and instructive booklet, 42 pages, on ball and roller bearing lubrication.

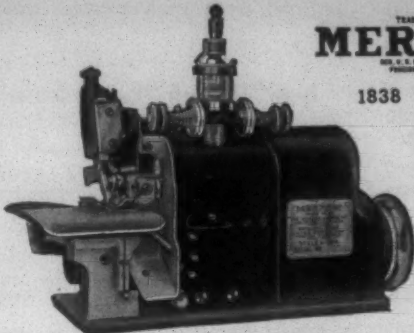
It is a well prepared and profusely illustrated booklet, dealing not only with lubrication, but also covering such points as bearing construction, types of bearings, relation of field to laboratory testing, value of operating tests, etc. Of particular interest are diagrams showing different methods of application of lubricants to different types of bearings, such as oil level control, splash feed, drop feed, atomizing or spraying oil, circulating oil, and wick feed. Also of interest is a chart of ball bearing types showing the characteristics and abilities of eleven.

New Booklet on Lumber

Jackson Lumber Company, of Lockhart, Ala., has just published an instructive, illustrated booklet of facts about lumber.

Included in the booklet are views of the company's plant and products, methods of loading, stacking, treating, etc. A rather complete list of products information as to quality, grading specifications, etc., are also included.

It is a handy book for anyone concerned with purchasing of lumber.



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Opportunities for Executive Development and Advancement

(Continued from page 6)

and, chances are, have nowhere to turn for a livelihood. The over-all soundness of the formula has no validity in that locality. It is that point that management must be equipped with that quality of trained executive direction to reconcile in the best possible way the technical demands with the human factors. In the particular case here cited, there is only a question of time involved, and if the installation of the new equipment is made in a gradual manner, accommodation can be made for the displaced workers with very little difficulty. It is essential, however, that there be in management that capacity to recognize the problems involved which are apart from the technical aspects of the situation. The ability to recognize such problems is a matter of conscious training and careful selection.

As another illustration, general trends may make a business obsolete long before it has become so in a technical sense. The requirement to diagnose the competitive position of a business and its position and relation to the major trend of affairs, demands a type of executive education and training which is as essential as it is scarce.

These illustrations simply typify those intangible aspects of a business, the successful answers to which are as important as the correct solution of technical problems—probably more so. Executives who have had experience in dealing with such, will recognize that their success in answering them does not come from training available in present text books or courses of instruction. Their experience has come largely from trial and error, or possibly some have been saved the error by marked genius for ascertaining the correct answers.

At first glance, it might seem preposterous to suggest that anything so shot with variables as "the esprit de corps of an organization" might be made the subject matter of a course of training. The matter could be dismissed with the summary that every organization should have a good esprit de corps and that every executive should work toward that end. That is hardly sufficient, however. The executive being trained should be exposed to an organization in which an excellent esprit de corps exists. The policies which have contributed to the up-building of that spirit, should be thoroughly understood and the efforts exerted as part of the daily routine of the business to maintain it should be made apparent. Opportunity for varied experience in dealing with these non-measurable aspects should be thrust in the way of those being trained for executive duties. Of especial importance is contact with those who have to deal with such problems; for by such contact the hazard for faulty guessing can be impressed upon the one being trained. It seems that the essential element is to recognize that definite and planned training is highly necessary in preparing executives to cope with these various and perplexing problems of a non-technical nature.

There is a great opportunity to render a service to business administration and industrial management by providing more systematic training in these non-technical matters which play such a large part in industrial and business activity. The type of training given those who

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are selected to orient business activities is of supreme importance—for with technology, as adequate as it is, it matters a great deal what manner of men are to point the direction and assign the uses of technical facilities. Nothing less than the best will do for our industrial managements. The stakes are too great to risk inadequate training and the opportunities are too great for any individual to be satisfied with less than the most adequate training which can be devised.

SUMMARY

It is important to distinguish between the "business side" and the "technical side" of industrial management. Technical training is quite adequate, and the procedures of selection, training and placement of potential technical executives are very well defined. Such is not the case with the training and development of business men. To a large extent, they just happen, either by some peculiar genius breaking through or by the chance of seniority. For lack of a better definition, the "business" side of industrial management has to do with those characteristics of management which cannot be definitely measured, whereas the technical side has to do with those characteristics which can be measured. The content of the "business side" is made up of such factors as style, anticipation of business trends, the "feel" of markets, organizational esprit de corps, etc., etc.

Without in any way disparaging or minimizing the importance or necessity of technical competence, it is desirable to emphasize that correct

gauging of these characteristics which cannot be measured is essential to the success of any business enterprise, and executives who are qualified to deal with such are of utmost value to management. It is important that there be a more thorough understanding of the necessity of providing industrial management with more adequate business training as distinguished from, and in addition to, technical training.

What program of training can be undertaken to insure development of executives who can cope with these unmeasurable characteristics of business?

- A. Exposure to such problems as they arise.
- B. Opportunity for a varied experience.
- C. Contact with those who deal with such problems.
- D. Thorough coaching on the hazard of faulty guessing.

"Business men" executives guide technicians. They give direction and tempo to business enterprise. It is highly desirable that techniques of training business men be developed, comparable in effectiveness to those which have been developed to train technicians.

*Presented at Seventh International Management Congress, Washington, D. C., Sept. 19th-23rd.

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ASHWORTH BROS., Inc., Charlotte, N. C. Sou. Offices, 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S. W., Atlanta, Ga.; Texas Rep., Textile Supply Co., Dallas, Tex.

ATLANTA HARNESS & REED MFG. CO., Atlanta, Ga. Succeeded by Steel Heddle Mfg. Co., Atlanta Division. (See this company's listing.)

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CLINTON CO., Clinton, Iowa. Luther Knowles, Sou. Agt., Box 127, Telephone 2-2486, Charlotte, N. C. Sou. Reps., Grady Gilbert, Telephone 1132, Concord, N. C.; Clinton Sales Co., Inc.,

W. T. Smith, 2 Morgan Bldg., Greenville, S. C.; Lee Gilbert, Box 481, Tel. 2913, Spartanburg, S. C.; A. C. Boyd, 1071 Bellevue Drive, N. E., Tel. Hemlock 7055, Atlanta, Ga.; Dana H. Alexander (Mill and Paper Starch Div.), Birmingham, Ala. Stocks carried at Carolina Transfer & Storage Co., Charlotte; Consolidated Brokerage Co., Greenville, S. C.; Atlanta Service Warehouse, Atlanta.

CORN PRODUCTS REFINING CO., 17 Battery Place, New York City. Corn Products Sales Co., Greenville, S. C.; John R. White, Mgr.; Corn Products Sales Co., Montgomery Bldg., Spartanburg, S. C.; J. Canty Alexander, Asst. Sou. Mgr.; Corn Products Sales Co. (Mill and Paper Starch Div.), Hurt Bldg., Atlanta, Ga.; C. G. Stover, Mgr.; Corn Products Sales Co., 824-25 N. C. Bank Bldg., Greensboro, N. C.; W. R. Joyner, Mgr.; Corn Products Sales Co., Comer Bldg., Birmingham, Ala.; L. H. Kelley, Mgr. Stocks carried at convenient points.

CROMPTON & KNOWLES LOOM WORKS, Worcester, Mass. Sou. Plant, Charlotte, N. C.

CUTLER, ROGER W., 141 Milk St., Boston, Mass. Sou. Office, Woodside Bldg., Greenville, S. C. Southern Tape Agent: Byrd Miller, Woodside Bldg., Greenville, S. C. Roll Agents: Dixie Roller Shop, Rockingham, N. C.; A. J. Whittemore & Sons, Burlington, N. C.; Dixie Roll & Cot Co., Macon, Ga.; Morrow Roller Shop, Albemarle, N. C.; Greenville Roll & Leather Co., Greenville, S. C. Take Up Roll Agent: M. Bradford Hodges, Box 752, Atlanta, Ga.

DARY RING TRAVELER CO., Taunton, Mass. Sou. Rep., John E. Humphries, P. O. Box 843, Greenville, S. C.; Chas. L. Ashley, P. O. Box 720, Atlanta, Ga.

DILLARD PAPER CO., Greensboro, N. C., Greenville, S. C., Charlotte, N. C.

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DRAPER CORPORATION, Hopedale, Mass. Sou. Rep., E. N. Darrin, Vice-Pres.; Sou. Offices and Warehouses, 242 Forsyth St., S. W., Atlanta, Ga.; W. M. Mitchell; Spartanburg, S. C., Clare H. Draper, Jr.

DU PONT DE NEMOURS & CO., Inc., E. I., Organic Chemicals Dept., Dyestuffs and Fine Chemicals Div., Wilmington, Del. John L. Dabbs, Sou. Sales Mgr.; D. C. Newman, Asst. Sou. Sales Mgr.; J. D. Sandridge, Asst. Sou. Sales Mgr.; E. P. Davidson, Asst. Mgr. Technical. Sou. Warehouses, 414 S. Church St., Charlotte, N. C. Reps., C. H. Asbury, H. B. Constable, J. P. Franklin, J. F. Gardner, L. E. Green, M. D. Haney, W. R. Ivey, S. A. Fettus, A. W. Picken, N. R. Vieira, Charlotte Office; J. T. McGregor, Jr., James A. Kidd, 1035 Jefferson Standard Bldg., Greensboro, N. C.; John L. Dabbs, Jr., G. H. Boyd, 804 Provident Bldg., Chattanooga, Tenn.; R. D. Sloan, T. R. Johnson, Greenville, S. C.; W. F. Crayton, Adam Fisher, Jr., W. A. Howard, Columbus, Ga.; J. A. Franklin, Augusta, Ga.; Tom Taylor, Newnan, Ga.

DU PONT DE NEMOURS & CO., E. I., Grasselli Chemicals Dept., Wilmington, Del. Howard J. Smith, Dist. Sales Mgr., W. F. Hummel, Salesman, 414 S. Church St., Charlotte, N. C.

DU PONT DE NEMOURS & CO., E. I., Rayon Div., F. H. Coker, Dist. Sales Mgr., 414 S. Church St., Charlotte, N. C. Acetate Div., J. J. Cook, Dist. Sales Mgr., 414 S. Church St., Charlotte, N. C.

DU PONT DE NEMOURS & CO., Inc., E. I., The R. & H. Chemicals Dept. Main Office, Wilmington, Del.; Charlotte Office, 414 S. Church St., LeRoy Kennette, District Sales Mgr. Reps., J. L. Moore, Technical Man, Penn R. Lindsay, Salesman, 414 S. Church St.; John C. Robertson, 1220 Pasadena Ave., Atlanta, Ga., Technical Man; R. C. Cochran, 356 Pine Tree Drive, Atlanta, Ga., Salesman; W. F. Murphy, 1106 19th Ave., Nashville, Tenn., Ceramic Salesman.

EATON, PAUL B., 213 Johnston Bldg., Charlotte, N. C.

ENGINEERING SALES CO., 217 Builders' Bldg., Charlotte, N. C., S. R. and V. G. Brookshire.

FOSTER MACHINE CO., Westfield, Mass. Sou. Office, 813 Johnston Bldg., Charlotte, N. C.

FRANKLIN MACHINE CO., 44 Cross St., Providence, R. I.

FRANKLIN PROCESS CO., Providence, R. I. Sou. Plants, Greenville, S. C., and Chattanooga, Tenn.

FREDERICK IRON & STEEL CO., THE, Frederick, Md. Sou. Reps., R. L. Selby, Piedmont Engineering Co., Charlotte, N. C.; Boller Equipment Service Co., Atlanta, Ga.

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GENERAL DYESTUFF CORP., 435 Hudson St., New York City. Sou. Office and Warehouse, 1101 S. Blvd., Charlotte, N. C. B. A. Stigen, Mgr.

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GENERAL ELECTRIC VAPOR LAMP CO., Hoboken, N. J. Sou. Reps., Frank E. Keener, 137 Spring St., N. W., Atlanta, Ga.; C. N. Knapp, Commercial Bank Bldg., Charlotte, N. C.

GILL LEATHER CO., Salem, Mass. Sou. Reps., Gastonia, N. C., W. G. Hamner; Greenville, S. C., W. J. Moore, Ralph Gossett; Dallas, Tex., Russell A. Singleton Co., Inc.; Griffin, Ga., Belton C. Plowden.

GOODYEAR TIRE & RUBBER CO., Inc., THE, Akron, O. Sou. Offices and Reps., W. C. Killick, 209-11 E. 7th St., Charlotte, N. C.; J. L. Sturges, 141 N. Myrtle Ave., Jacksonville, Fla.; C. O. Roome, 500-6 N. Carrollton Ave., New Orleans, La.; J. H. Nelherding, 1128 Union Ave., Memphis, Tenn.; W. R. Burtie, 3rd and Guthrie, Louisville, Ky.; R. G. Abbott, Allen and Broad Sts., Richmond, Va.; E. A. Filley and M. W. Sledge, 214 Spring St., N. W., Atlanta, Ga.; J. L. Sinclair, 700 S. 21st St., Birmingham, Ala.; Atlanta Belting Co., Atlanta, Ga.; Battey Machinery Co., Rome, Ga.; Bluefield Supply Co., Bluefield, W. Va.; Gastonia Mill Supply Co., Gastonia, N. C.; Knoxville Belting & Supply Co., Knoxville, Tenn.; Laurel Mach. & Fdry. Co., Laurel, Miss.; Orlando Armature Works, Orlando, Fla.; McComb Supply Co., Harlan, Ky.; and Jellico, Tenn.; Mills & Lupton Supply Co., Chattanooga, Tenn.; Mississippi Fdry. & Mach. Co., Jackson, Miss.; Moore-Handley Hdwe. Co., Birmingham, Ala.; Morgan's, Inc., Savannah, Ga.; Mulberry Supply Co., Mulberry, Fla.; C. T. Patterson Co., Inc., New Orleans, La.; Pensacola Tool & Supply Corp., Pensacola, Fla.; I. W. Phillips, Tampa, Fla.; Pye-Barker Supply Co., Atlanta, Ga.; Ralley Millam Hdwe. Co., Miami, Fla.; Sullivan Hdwe. Co., Anderson, S. C.; Superior Iron Works & Supply Co., Shreveport, La.; Taylor Iron Works & Supply Co., Macon, Ga.; Textile Mill Supply Co., Charlotte, N. C.; Tidewater Supply Co., Norfolk, Va.; Columbia, S. C.; Asheville, N. C.; W. Reynolds Barker, 1634 Laurel Ave., Knoxville, Tenn.; S. Donald Fortson, Augusta, Ga.

GREENVILLE BELTING CO., Greenville, S. C.

GULF OIL CORPORATION OF PA., Successor to GULF REFINING CO., Pittsburgh, Pa. Division Sales Offices: Atlanta, Ga.—A. M. Wright, Greenville, S. C.; T. C. Scaffie, Spartanburg, S. C.; J. H. Hooten, Gastonia, N. C.; R. G. Burkhalter, Charlotte, N. C.; G. P. King, Jr., Augusta, Ga.; Boston, Mass.: New York, N. Y.: Philadelphia, Pa.; New Orleans, La.; Houston, Tex.; Louisville, Ky.; Toledo, O.

HART PRODUCTS CORP., 1440 Broadway, New York City. Sou. Mgr., Charles C. Clark, Box 274, Spartanburg, S. C. Sales Reps., Tally W. Piper, Box 534, Fairfax, Ala.; W. R. Sargent, Greenville, S. C.

H & B AMERICAN MACHINE CO., Pawtucket, R. I. Sou. Offices, 815 The Citizens and Southern National Bank Bldg., Atlanta, Ga.; J. C. Martin, Agt.; Johnston Bldg., Charlotte, N. C.; Elmer J. McVay, Mgr.; Fritz Swefel, Fred Dickinson, Jim Miller, sales and service representatives.

HERCULES POWDER COMPANY, Wilmington, Del. Distributors—Burkart-Schier Chemical Co., Chattanooga, Tenn.; Hercules Powder Co., Paper Makers Chemical Div., Atlanta, Ga. Warehouses—American Storage and Warehouse Co., 505-513 Cedar St., Charlotte, N. C.; Textile Warehouse Co., 511-513 Rhett St., Greenville, S. C.; South Atlantic Bonded Warehouse Corp., Washington and Macon Sts., Greensboro, N. C.

HERMAS MACHINE CO., Hawthorne, N. J. Sou. Rep., Carolina Specialty Co., P. O. Box 520, Charlotte, N. C.

HOLBROOK RAWHIDE CO., Providence, R. I. Sou. Distributors, Odell Mill Supply Co., Greensboro, N. C.; Textile Mill Supply Co., and Charlotte Supply Co., Charlotte, N. C.; Gastonia Mill Supply Co., Gastonia, N. C.; Sullivan Hdwe. Co., Anderson, S. C.; Montgomery & Crawford, Spartanburg, S. C.; Carolina Supply Co., Greenville, S. C.; Fulton Supply Co., Atlanta, Ga.; Southern Belting Co., Atlanta, Ga.; Greenville Textile Mill Supply Co., Greenville, S. C., and Atlanta, Ga.; Young & Vann Supply Co., Birmingham, Ala.; Waters-Garland Co., Louisville, Ky.

HOUGHTON & CO., E. F., 240 W. Somerset St., Philadelphia, Pa. Sou. Sales Mgr., W. H. Brinkley, 1301 W. Morehead St., Charlotte, N. C. Sou. Reps., Walter Andrew, 1306 Court Square Bldg., Baltimore, Md.; C. L. Elgert, 1306 Court Square Bldg., Baltimore, Md.; S. P. Schwoyer, 507 N. Main St., High Point, N. C.; D. O. Wylie, 1301 W. Morehead St., Charlotte, N. C.; J. J. Reilly, 2855 Peachtree Rd., Atlanta, Ga. (Apt. 45); H. F. Graul, 605 Idlewild Circle, Birmingham, Ala.; V. C. Shadden, 1821 Auburndale Ave., Chattanooga, Tenn.; B. E. Dodd, 333 St. Charles St., New Orleans, La.; J. W. Byrnes, 333 St. Charles St., New Orleans, La.; G. J. Reese, 402 S. Independence St., Sapulpa, Okla.

HOUGHTON WOOL CO., 253 Summer St., Boston, Mass. Sou. Rep., Jas. E. Taylor, P. O. Box 2084, Phone 3-3692, Charlotte, N. C.

HOWARD BROS. MFG. CO., Worcester, Mass. Sou. Office and Plant, 244 Forsyth St., S. W., Atlanta, Ga.; Guy L. Melchor, Mgr. S. W. Rep., Russell A. Singleton Co., Inc., Mall Route 5, Dallas, Tex.; J. Floyd Childs, 244 Forsyth St., S. W., Atlanta, Ga.

HUBINGER CO. THE, Keokuk, Iowa. Southeastern Sales Rep., Chester M. Goodyear, 1284 Piedmont Ave., N. E., Atlanta, Ga.

Ga. Warehouse stocks at Greenville, S. C., Winston-Salem, N. C., Atlanta, Ga.

KENNEDY CO., W. A., 814 S. Tryon St., Charlotte, N. C. W. A. Kennedy, Pres.

JACOBS MFG. CO., E. H., Danielson, Conn. Sou. Rep., W. Irving Bullard, Pres., Charlotte, N. C. Mgr. Sou. Service Dept., S. B. Henderson, Greer, S. C.; Dan B. Griffin, Southern Sales Rep., E. H. Jacobs Mfg. Co. Sou. Distributors, Odell Mill Supply Co., Greensboro, N. C.; Textile Mill Supply Co., and Charlotte Supply Co., Charlotte, N. C.; Gastonia Mill Supply Co., Gastonia, N. C.; Shelby Supply Co., Shelby, N. C.; Sullivan Hdwe. Co., Anderson, S. C.; Montgomery & Crawford, Spartanburg, S. C.; Industrial Supply Co., Clinton, S. C.; Carolina Supply Co., Greenville, S. C.; Fulton Supply Co., Atlanta, Ga.; Southern Belting Co., Atlanta, Ga.; Greenville Textile Mill Supply Co., Greenville, S. C., and Atlanta, Ga.; Young & Vann Supply Co., Birmingham, Ala.; Waters-Garland Co., Louisville, Ky.

JACKSON LUMBER CO., Lockhart, Ala.

KEEVER STARCH CO., Columbus, O. Sou. Office, 1200 Woodside Bldg., Greenville, S. C.; Daniel H. Wallace, Sou. Agt. Sou. Warehouses, Greenville, S. C., Charlotte, N. C. Sou. Reps., Claude B. Iler, P. O. Box 1383, Greenville, S. C.; Luke J. Castle, 515 N. Church St., Charlotte, N. C.; F. M. Wallace, 1115 S. 26th St., Birmingham, Ala.

LAUREL SOAP MFG. CO., Inc., 2607 E. Toga St., Philadelphia, Pa. Sou. Rep., A. Henry Gaede, P. O. Box 1033, Charlotte, N. C.

MAGUIRE & CO., JOHN P., 370 Fourth Ave., New York City. Sou. Rep., Taylor R. Durham, First National Bank Bldg., Charlotte, N. C.

THE MERROW MACHINE CO., 8 Laurel St., Hartford, Conn. E. W. Hollister, P. O. Box 721, Spartanburg, S. C.; R. B. Moreland, P. O. Box 895, Atlanta, Ga.

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NATIONAL OIL PRODUCTS CO., Inc., Harrison, N. J. Sou. Offices and Plant, Cedar town, Ga. Sou. Reps., D. Rion, Cedar town, Ga.; C. E. Elphick, 100 Bulst Ave., Greenville, S. C.; R. B. MacIntyre, care D. G. MacIntyre, Franklinton, N. C.; Paul Starke, 2026 Eaton Place, Baltimore, Md.; G. H. Small, 226 Bolling Road, Atlanta, Ga. Warehouse, Chattanooga, Tenn.

NATIONAL RING TRAVELER CO., 257 W. Exchange St., Providence, R. I. Sou. Office and Warehouse, 131 W. First St., Charlotte, N. C. Sou. Agt., C. D. Taylor, Gaffney, S. C. Sou. Reps., L. E. Taylor, Box 272, Atlanta, Ga.; Otto Pratt, Gaffney, S. C.; H. B. Askew, Box 272, Atlanta, Ga.

NEW ENGLAND BOBBIN & SHUTTLE CO., Nashua, N. H. Sou. Rep., D. C. Ragan, High Point, N. C.

N. Y. & N. J. LUBRICANT CO., 292 Madison Ave., New York City. Sou. Office, 1000 W. Morehead St., Phone 3-7191, Charlotte, N. C., Spartanburg, S. C., Atlanta, Ga., Greenville, S. C.

NORLANDER MACHINE CO., New Bedford, Mass. Sou. Plant, 213 W. Long St., Gastonia, N. C.

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PARKS-CRAMER CO., Plants at Fitchburg, Mass., and Charlotte, N. C. Atlanta Office, Bona Allen Bldg.

PERKINS & SON, Inc., B. F., Holyoke, Mass.

PROVIDENT LIFE & ACCIDENT INS. CO. (Group Accident and Health, and Welfare Plans Div.), Chattanooga, Tenn. Southeastern Div. Office, 203 Commercial Bldg., Gastonia, N. C.

THE PURE OIL CO., Industrial Sales Dept., Southeastern Division Office, 140 Spring St. S. W., Atlanta, Ga.; O. T. Clark, Mgr.

RHODE ISLAND TOOL CO., Providence, R. I. Sou. Rep., Henry Anner, Box 1515, Greenville, S. C.

RHOADS, J. E. & SONS, 35 N. Sixth St., Philadelphia, Pa. Sou. Reps., L. H. Schwoebel, 512 N. Spring St., Winston-Salem, N. C.; J. W. Mitchell, Box 1589, Greenville, S. C.; A. S. Jay, 1600 S. 21st St., Birmingham, Ala.; J. T. Hoffman, 88 Forsyth St., S. W., Atlanta, Ga.; Atlanta Store, C. R. Mitchell, Mgr., 88 Forsyth St., S. W., Phone Walnut 5915, Atlanta, Ga.

ROY & SONS, B. S., Worcester, Mass. Sou. Office, Greenville, S. C. John R. Roy, Representative.

SACO-LOWELL SHOPS, 60 Batterymarch St., Boston, Mass. Sou. Office and Supply Depot, Charlotte, N. C.; Walter W. Gayle, Sou. Agent; Atlanta, Ga.; John L. Graves and Miles A. Comer, Selling Agents; Greenville, S. C.; H. P. Worth, Selling Agent.

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SNAP-ON TOOLS CORP., Kenosha, Wis. 623 Spring St., N. W., Atlanta, Ga.; 20 E. 21st St., Baltimore, Md.; 2809 Main St., Dallas, Tex.; 119 W. Ashley St., Jacksonville, Fla.; 2516 Grand Ave., Kansas City, Mo.; 940 Poydras St., New Orleans, La.; 1645 W. Broad St., Richmond, Va.; 2647 Washington Blvd., St. Louis, Mo.

SOCONY-VACUUM OIL CO., Inc., Southeastern Div. Office, 1602 Baltimore Trust Bldg., Baltimore, Md. Warehouses: Union Storage Warehouse Co., 1000 W. Morehead St., Charlotte, N. C.; Textile Warehouse Co., 511 Rhett St., Greenville, S. C.; South Atlantic Bonded Warehouse Co., Greensboro, N. C.; New South Express Lines, Columbia, S. C.; Terminal Storage Corp., 317 N. 17th St., Richmond, Va.; Taylor Transfer Co., 102 Boush St., Norfolk, Va.

SONOCO PRODUCTS CO., Hartsville, S. C.

SOUTHERN SPINDLE & FLYER CO., Charlotte, N. C.

STALEY MFG. CO., A. E., Decatur, Ill. Sou. Offices, 1710 Rhodes-Haverty Bldg., Atlanta, Ga. Wm. H. Randolph, Jr., Sou. Mgr., L. A. Dillon, Asst. Sou. Mgr., 812 Montgomery Bldg., Spartanburg, S. C.; Geo. A. Dean, Reps. W. T. O'Steen, Greenville, S. C.; H. F. Taylor, Jr., Monroe, N. C.; John T. Higginbotham, H. A. Mitchell, Birmingham, Ala.

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STEIN, HALL & CO., Inc., 285 Madison Ave., New York City. Sou. Office, Johnston Bldg., Charlotte, N. C., Ira L. Griffin, Mgr.

STERLING RING TRAVELER CO., 101 Lindsey St., Fall River, Mass. Sou. Rep., Geo. W. Walker, P. O., Box 1894, Greenville, S. C.; D. J. Quillen, P. O. Box 443, Spartanburg, S. C.

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TERRELL MACHINE CO., Charlotte, N. C. E. A. Terrell, Pres. and Mgr.

TEXAS CO., THE, New York, N. Y. District Offices, Box 901, Norfolk, Va., and Box 1722, Atlanta, Ga. Bulk plants and warehouses in all principal cities. Lubrication Engineers, H. J. Marlow, W. H. Grose, W. P. Warner, Greensboro, N. C.; W. H. Goebel, Roanoke, Va.; A. H. Bamman, Norfolk, Va.; P. H. Baker, Spartanburg, S. C.; D. L. Keys, Richmond, Va.

TEXTILE-FINISHING MACHINERY CO., Providence, R. I. Sou. Office, Johnston Bldg., Charlotte, N. C.

TEXTILE SHOP, THE, Franklin St., Spartanburg, S. C. E. J. Eaddy, Sec. and Treas.

UNIVERSAL WINDING CO., Providence, R. I. Sou. Offices, Charlotte, N. C., Atlanta, Ga.

U S BOBBIN & SHUTTLE CO., Lawrence, Mass. Sou. Plants Greenville, S. C.; Johnson City, Tenn., and Monticello, Ga. Sou. Reps., E. Rowell Holt, J. M. Gregg, 208 Johnston Bldg., Charlotte, N. C.; M. Ousley, P. O. Box 816, Greenville, S. C.; Chas. Sidney Jordan, Monticello, Ga., and L. K. Jordan, Sales Mgr., Monticello, Ga.

U. S. RING TRAVELER CO., 159 Aborn St., Providence, R. I. Sou. Reps., William W. Vaughan, P. O. Box 792, Greenville, S. C.; Oliver B. Land, P. O. Box 158, Athens, Ga.; Torrence L. Maynard, P. O. Box 456, Belmont, N. C.

VEEDER-ROOT, Inc., Hartford, Conn. Sou. Office, Room 231 W. Washington St., Greenville, S. C., Edwin Howard, Sou. Sales Mgr.

VICTOR RING TRAVELER CO., Providence, R. I., with Sou. Office and Stock Room at 173 W. Franklin Ave., P. O. Box 842, Gastonia, N. C. Also stock room in charge of B. F. Barnes, Jr., Mgr., 1733 Inverness Ave., N. E., Atlanta, Ga.

VISCOSE CO., Johnston Bldg., Charlotte, N. C., Harry L. Dalton, Mgr.

WAK, Inc., 814 S. Tryon St., Charlotte, N. C. W. A. Kennedy, Pres.

WATSON-WILLIAMS MFG. CO., Millbury, Mass. Sou. Reps., D. C. Ragan, High Point, N. C.; E. V. Wilson, Greenville, S. C.

WHITIN MACHINE WORKS, Whitinsville, Mass. Sou. Office, Whitin Bldg., Charlotte, N. C. W. H. Porcher and R. I. Dalton, Mgrs.; 1317 Healey Bldg., Atlanta, Ga. Sou. Reps., M. P. Thomas, Charlotte Office; I. D. Wingo and M. J. Bentley, Atlanta Office.

WHITINSVILLE SPINNING RING CO., Whitinsville, Mass. Sou. Rep., H. Ross Brock, LaFayette, Ga.

WINDLE & CO., J. H., 231 S. Main St., Providence, R. I.

WOLF, JACQUES & CO., Passiac, N. J. Sou. Reps., C. R. Bruning, 306 S. Chapman St., Greensboro, N. C.; G. W. Searell, Jefferson Apts., 501 E. 5th St., Chattanooga, Tenn.

Hercules Declares Dividend

Wilmington, Del.—The Board of directors of Hercules Powder Company on August 31st declared a dividend of 25 cents a share on the common stock of the company.

This is payable September 24 to stockholders of record at the close of business on September 13.

American Viscose Announces Fabric Development Dept.

American Viscose Corporation announces the opening of a new Fabric Development Department, under the direction of Pierre Sillan.

Mr. Sillan has had extensive experience in the creation of new fabrics. In this country Mr. Sillan has been associated with Stehli Silk Company, Amalgamated Silk Corporation, and more recently with A. D. Juilliard.

Mr. Sillan studied at the University of Grenoble and at Ecole Municipale de Tissage de la Ville de Lyon.

This fabric Development Department will bring a new service to the customers of American Viscose Corporation. It will concern itself with the creation of new fabric ideas in Crown Rayon yarns including viscose and acetate, as well as Crown staple fiber.

With the establishment of this new undertaking, American Viscose Corporation brings to its customers a complete service. This service embraces: first, the most extensive production facilities in the entire rayon industry; second, a merchandising assistance to users of Crown Rayon yarns as embodied in the Crown Quality Control Plan and the identification of Crown Tested Rayon Fabrics and now, third, a Fabric Development Department to supplement and assist the work of fabric producers in bringing to the market new and more diversified Crown Rayon Fabrics.

Promoting Shirt With Collar and Cuff of "Aeroplane" Cloth

Promotions are now in progress for Wings shirts, manufactured by the Piedmont Shirt Co., of Greenville, S. C. This is the shirt with collar and cuff made of "Aeroplane" cloth, a fabric declared to meet Government specifications for covering airplane wings and fuselage. The firm guarantees that collars and cuffs will outlive the shirt, in addition to its standard one-year guarantee on the shirt.

United States Testing Co.'s report on the Aeroplane fabric certified that collars and cuffs showed no evidence of wear after 100 commercial laundering treatments.

Firm plans to take space in national magazines for Christmas promotions and is also offering dealers a program of co-operative advertising.

The company recently announced it has increased its production on "Wings" shirts to 3,000 dozen a week, and will build another plant to handle the greater output. It is planned to add a line of fancies, in addition to the plain whites and solid colors now being made.

Sterling Ring Travelers

STERLING

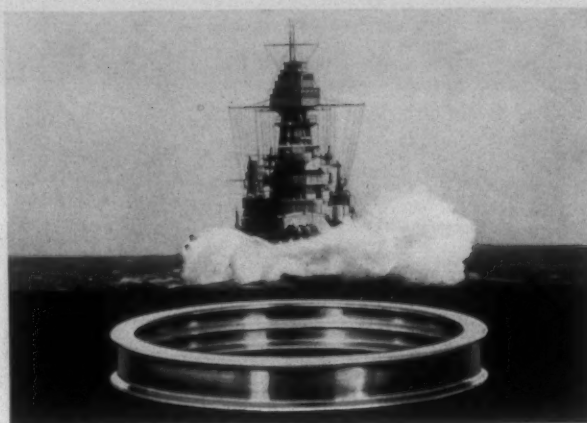
Our Name and Our Aim
Spinning and Twister
Travelers that are
"STERLING" in every
respect, with Service to
match.

Call Our Southern
Representatives

GEORGE W. WALKER
Box 1894
Greenville, S. C.

D. J. QUILLEN
Box 443
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STERLING RING TRAVELER CO.
FALL RIVER, MASS.



FULL SPEED AHEAD!

*Will your rings permit full production
speed when you need it?*

Replacement of worn rings with the DIAMOND FINISH High-Polish kind gives a production increase up to 20% through smoother running at faster speeds. Where lubricated rings can be utilized, gains up to 80% are reported by mills who have put in our patented designs.

WHITINSVILLE (MASS.)

SPINNING RING CO.
Makers of Spinning and Twister Rings since 1873



Southern Representative: H. ROSS BROCK, Lafayette, Georgia
Mid-West Representative: ALBERT R. BREEN, 80 E. Jackson Blvd., Chicago

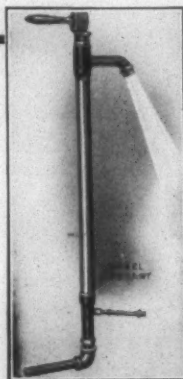
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If convenience is as important to you as it is to hundreds of other visitors to New York . . . You, too, will make The Vanderbilt your New York headquarters. Close to important business and social centers. Transportation facilities to any part of Manhattan just outside the door. Cool, spacious rooms . . . Modern in every detail.

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The **VANDERBILT HOTEL**
PARK AVENUE AT 34th STREET, N. Y.



A SUPPLY OF WATER
OUTSIDE WHICH WILL
N E V E R
FREEZE!


A **VOGEL** Frost-Proof Hydrant, which costs so little to install, assures you of this convenience. **VOGEL** Hydrants have been sold by plumbers for more than 25 years: they have no mechanism to get out of order and when properly installed will never freeze no matter how cold the weather. Install a **VOGEL** Frost-Proof Hydrant and assure yourself of a dependable supply of water all year 'round.

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man who
sends in
this card


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HARTFORD, CONN.

If there's any news in counter developments, the Veeder-Root representative always has it . . . *and has it first*. And he has the answers to counter problems . . . to questions of design and operation. He knows how to come to grips with a counter application, for he's a *practical* engineer.

Your Veeder-Root representative has a complete working knowledge of the most complete line of textile counters . . . and all the machines and processes they're used on. He's a good man to know . . . never wastes your time, generally has something of definite interest to contribute. So make use of his experience and knowledge . . . *see him when he calls*.

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Reset Revolution
Counter on Cotton
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